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FEBRUARY 2, 1929.

Vol. CX.

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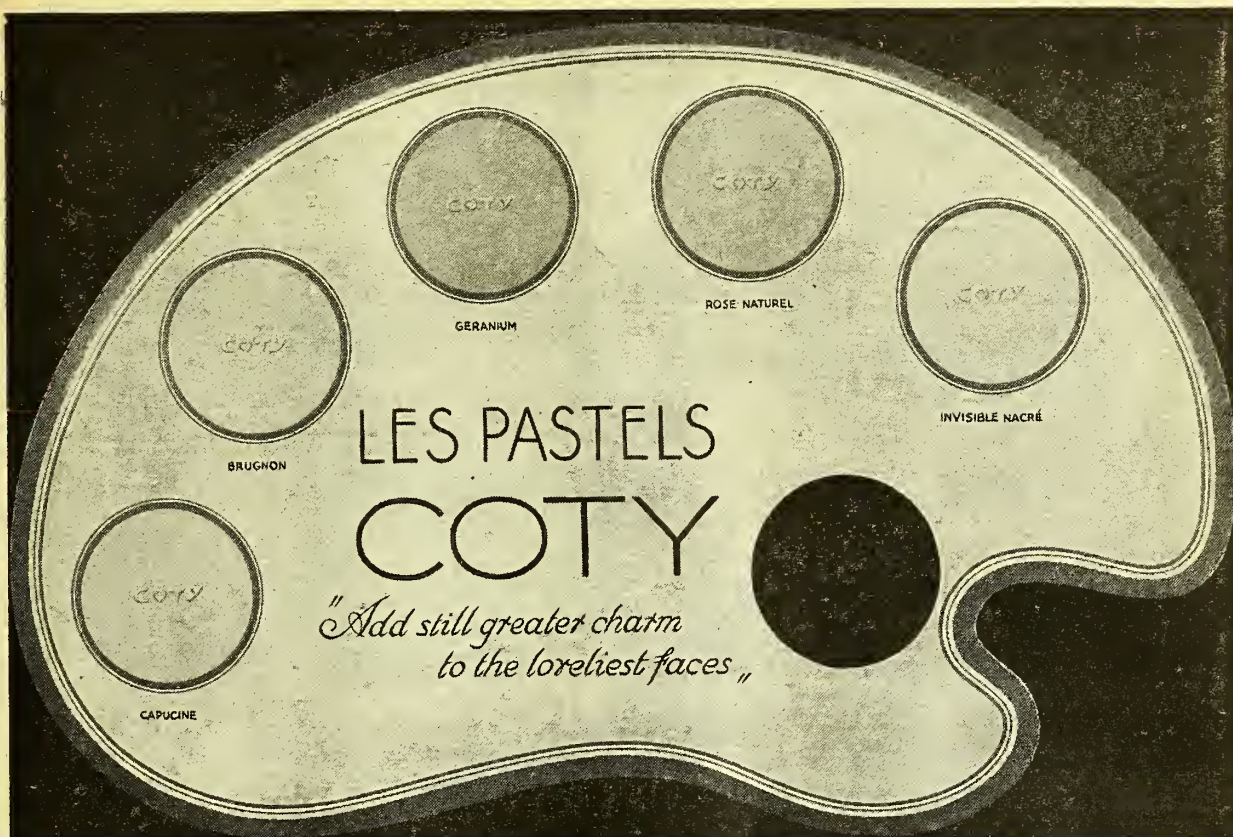
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INDEX TO ADVERTISERS

Allen, Stafford, & Sons, Ltd. (Peppermint Oils)	27	Burman & Sons, Ltd. (Hair Clippers) ..	22	Essences & Synthetics, Ltd. (Ess. Oils)	31
Anglo-American Oil Co., Ltd. (Nujol) ..	x	Burrough, J., Ltd. (Alcohol) Leader Page		Evans Sons Lescher & Webb, Ltd. (Pastilles) ..	13
Anzora Perfumery Co., Ltd.	48	Burroughs Wellcome & Co. ('Quin-exyl') ..	51	Farmer, F., & Co. (Rat Poison)	ix
Australian Drug Co., Ltd.	xxvii	Bush, W. J., & Co., Ltd. (Chemicals) ..	Cover	Ferris, J. & E., Ltd. (Artificial Limbs)	Leader Page
Auto-Dore, Ltd. (Automatic Vending Machine) ..	47	Butler & Crispe (Druggists' Sundries) ..	26	Fink, F., & Co. (Gums)	36
Association of Manfg. Chemists, Ltd. Col. Supp.		Camwal, Ltd. (Mineral & Aerated Waters) ..	xxvi	Frankenberg, L. (Razor Blades)	14
Ayrton, Saunders & Co., Ltd. (Wholesale Druggists)	15	Carr & Co., Ltd. (Bath Rasks)	xviii	Gardiner & Co. (The Scotch House), Ltd. (Overalls) ..	46
Battle, Hayward & Bower (Weed Killers, &c.)	xvi	Cartwright, W. B., Ltd. (Moorland Tablets) ..	21	Garfield Tea Co.	44
Battle, J. C. M. (Vermin Killer) ..	xiii	Cataline Co. (Veterinary Medicines) ..	xvi	Genoxide, Ltd. (Hydrogen Peroxide) ..	v
Bell, John, Hills & Lucas, Ltd. (Pharm. Preps.) ..	36	Cellophane Co., Ltd. (Wrapping Material) ..	40	George, Ernest J. (Valuer, &c.) Col. Supp.	
Berdoo & Fish (Valuers, &c.) Col. Supp.		Cephos, Ltd. (Headache Remedy) ..	xxvi	Gilmont Products, Ltd. (New Mix Tooth Paste) ..	9
Berg, E., Ltd. (Shopfittings) ..	46-Col. Supp.	Christy, T., & Co. (Dr. Page Barker, Pyshan Points Tea) ..	14-36	Glaxo	xxiii
Berners Proprietaries, Ltd. ("Dart-ring" Products)	Leader Page	Coate & Co. (Axminster), Ltd. (Tooth-brushes) ..	8	Gollin & Co. Pty., Ltd. ("Aspro") ..	xv
Blackie, R. ("Spun" Ointments)	x	Colton, Arthur, Co. (Machinery, &c.) ..	8	Gower, John (Books)	Col. Supp.
Blythe, W., & Co., Ltd. (Chemicals) ..	ii	Condy & Mitchell, Ltd. (Condy's Fluid) ..	i	Graesser-Monsanto Chemical Works, Ltd. (Chemicals) ..	Cover
Bob Martin, Ltd. (Dog Medicines, &c.) ..	xxiv	Coty (England), Ltd. (Perfumery) ..	3	Grout & Co., Ltd. (Crêpe Bandages) ..	xx
Bourjois, A., et Cie. (Toilet Preps.) ..	4	Cox, Arthur H., & Co., Ltd. (Solid Iodine) ..	Cover	Hackett, S. E. (Film Overstocks) ..	Col. Supp.
Boxall, Smith & Co. ("Nitrosclearan," &c.) ..	xxvi	Cranbux, Ltd. (Odor) ..	29	Hampshire, F. W., & Co., Ltd. (Snowfire Cream) ..	38
Brady & Martin, Ltd. (Galenicals, &c.) ..	xx	Craven & Co. (Agricultural Preps.) ..	xvi	Hampson, Fredk. (Bottles) ..	41
Brett & Co. (Valuers, &c.) ..	Col. Supp.	Crookes Laboratories (Collosol Ferromalt) ..	vi	Hanson, Wm., & Sons, Ltd. (Glass Bottles) ..	40
Brierley, John (Valuer, &c.) ..	Col. Supp.	Cupal, Ltd. (Flu Powders, &c.) ..	7	Harker, C. R., Stagg & Morgan, Ltd. (Petrolax) ..	viii
Bristol-Myers Co. (Ipana) Leader Page		Cussons, Sons & Co., Ltd. (Toilet Specialities) ..	3	Harley, T. (Rodine Rat Poison)	42
Bristol, T. F., & Co., Ltd. (Toilet Preps.) ..	16	Dearborn (1923), Ltd. (Toilet Preps.) ..	14	Heppells, Ltd. (Urodonal) ..	35
British Automatic Vendors, Ltd.	20	Denonal, Jules, & Co. (Spring Remedies) ..	xxii	Himrod Manfg. Co., Ltd. (Asthma Cure) ..	xxiv
British Diamalt Co. (Extract of Malt) ..	vi	Denver Chemical Manfg. Co., Ltd.	xv	Holophane, Ltd. (Scientific Lighting) ..	33
British Drug Houses, Ltd. (Pharmaceutical Products) ..	52	DeVilbiss Co., Ltd. (Sprays) ..	22	Hopkin & Williams, Ltd. (Chemicals) ..	iv
British Quain Sunlight, Ltd.	xxvi	Donovan Surgical Co. (Pile Instrument) ..	36	Imperial Chemical Industries, Ltd. (Speddo) ..	xi
British Thomson-Houston Co., Ltd. (Mazda Lamps) ..	44	Drug & Chemical Corporation, Ltd. (Influcine) ..	xvii	Johnson & Sons' Mfg. Chemists, Ltd. (Galenicals, &c.) ..	ii
Britton, Malcolm & Waymark, Ltd. (Druggist Sundries) ..	38	Dudley & Co., Ltd. (Cash Tills, &c.) ..	36-46	Josephs, Percy R. E. (Shopfittings) ..	Col. Supp.
Bronnley, H., & Co., Ltd. (Toilet Soaps, &c.) ..	vii	Duncan, Flockhart & Co. (Ophthalmic Capsules) ..	iv	Josephs, Philip, & Sons (Shopfittings) ..	Col. Supp.
Bruce, Dawson & Co. (Bottle Caps) ..	40	Edwards, Wm., & Sons (Aerofume) ..	49	Kay Bros., Ltd. (Pesticides) ..	xiv
Bruce, Starke & Co. (Cod-Liver Oil) ..	xi			Kaylene, Ltd. (Kaylene Preps.) ..	iv

[Continued overleaf.]

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INDEX—cont.

Kene Coagulating Cement Co.	48	Papier Poudré, Ltd. (Toilet)	32	Sier, Voss & Tomes (Transparit)	
Kent, G. B., & Sons, Ltd. (Brushes)	32	Peat Products (Sphagnol), Ltd. ..	xxi	Leader Page	
Kerfoot, Thos., & Co., Ltd. ("Emul- sion" Pastilles)	17	Penney & Co., Ltd. (Change of Address)	50	Singleton & Co., Ltd. (Wholesale Tobacconists)	36
King, J. C., Ltd. (Showcases, &c.)	44-46	Perfumaria Gal (London), Ltd. (Toilet Soap, &c.)	28	Smith, T. & H., Ltd. (Chemicals) Cover	
Kirby, Douglas & Co. (Monkey Strop)	44	Phillips, R. W., Ltd. (Bath Soap) ..	36	Solazzi (Liquorice)	xxvii
Kof-oh Co., Ltd. (Cough Cure)	xxiv	Pillischer, J. (Microscopes, &c.) ..	xxvii	Solidol Chem., Ltd. (Lysolats)	42
Kraska Co., Ltd. (Nail Polish)	22	Pitman, Sir Isaac, & Sons, Ltd. (Business Guide)	10	Solport Bros., Ltd. (Powder Puffs) ..	24
Lambert, L., & Co., Ltd. (Caramel)		Potter & Clarke, Ltd. (Wholesale Druggists)	25	Souplex, Ltd. (Razor Blades)	10
Leader Page		Proprietors of Noun, Ltd.	ix	Speedy D. & P. Service	36
LePersonne, L., & Co. (Glass Bottles and Jars)	40	Punkt Products, Depot (Friction Spray)	45	Speer, W. R., & Son (Toothbrushes)	14
Levermore, A., & Co., Ltd. (Precipi- tated Chalk)	36	Reddgrave, Butler & Co. (Packed Goods, &c.)	xii	Standard Yeast Co., Ltd. ("Lyco" Yeast Tablets)	xviii
Lysol, Ltd. (Distributing Change) ..	18	Reed & Carnrick (Glandular Preps.)	xxiv	Sterns, Ltd. (Oils, Petrolenm, &c.)	
Macfarlan, J. F., & Co. (Alkaloids, &c.)	Cover	Reliance Rubberware, Ltd. (Hot Water Bottles)	xxvi	Leader Page	
McGlashan, D., Ltd. (Abdine)	36	Richards, G. H., Ltd. (XLALL Preps.)	xiii	Stevenson & Howell, Ltd. (Essential Oils, &c.)	1
Mandall & Co., Ltd. (Licorice) ..	xxvii	Roberts & Co. (Roborans)	xix	Tatcho Tone Co. (Hair Preps.)	36
Marmite Food Extract Co., Ltd.	xix	Robinson & Sons, Ltd. (Boxes) ..	41-xxi	Taylor, Edward, Ltd. (Plasters)	34
Matthews, D., & Sons (Shopfittings)		Roebuck's Advertising Service (Wanie Blades)	32	Tibo Products Co. (Rex and Rinex)	
Col. Supp.		Rose, J. L., Ltd. (Pyrogallie Acid) ..	ii	Toinoco Handkerchief Co., Ltd.	39-xviii
Maw, S., Son & Sons, Ltd.	11	Rowland, A., & Sons, Ltd. (Macassar Oil)	24	Tomlinson & Hayward, Ltd. (Water- glass)	30-xv
Mculey & James, Ltd. (Tablet Pack- ing, &c.)	xxii	Rudduck & Co. (Shopfittings)		Towle, E. T., & Co., Ltd. (Penny- royal Pills, &c.)	xviii
Methylating Co., Ltd. (Methylated Spirit)	i	Sacker's Hygienic Comb & Toilet Supply Co. ("Sannakleen" Comb)	44	Town Talk Polish Co. (Polishing Cloths, &c.)	xix
Midgley & Parkinson, Ltd. (Yeast Preps.)	36	Sakabe & Co. (Toilet Brushes, &c.) ..	36	Vernon & Co., Ltd. (Surgical Dress- ings)	2
Mills, H., & Sons (Shopfittings)	44	Sangers (Ointments)	12	Washington Chemical Co., Ltd. (Pat- tinson's Magnesia)	v
Miltsim Lab. (Marienbad Water)	42	Sasso, P., & Figli (Olive Oil)	37	Westminster College of Pharmacy ..	46
Mond Staffordshire Refining Co., Ltd. (Monsol Prods.)	xxviii	Scherling, Ltd. (Pharmaceutical Specialities)	Leader Page	Whey Products, Ltd. (Milk Sugar) ..	6
Morgan Davis & Sons, Ltd. (Truss)	xii	Schimmel & Co. (Perf. Prods.)	32	Whiffen & Sons, Ltd. (Fine Chemicals)	iii
Myatt, W. J., & Co., Ltd. (Myatt Blades)	22	Scholl Manfg. Co., Ltd. (Bunion Reducer)	xx	White, R. F., & Co., Ltd. (Toilet Soaps)	24
National Association of Opticians ..	34	Scruton, O., & Co. (Nurse Harvey's Mixture)	24	White, Tomkins & Courage, Ltd. (Peppermint Oil)	30
Naylor, Chas. E. (Valuer, &c.) Col. Supp.		Scurr, C. A. (Optical Tuition)	34	Wilcox, Jozeau & Co. (Foreign Proprietaries)	Leader Page
Neill, J., & Co. (Sheffield), Ltd. (Razor Blades)	32	Shadeine Co. (Hair Dyes)	36	Winchester Manfg. Co., Ltd. ("Wimaco" Surgical Goods)	34
Newball & Mason (Ginger Wine Essence)	38	Shawyer, A. J., & Co. (Developing, &c.)	8	Wright, John, & Co. (Gas Radiators)	46
Oldfield, Pattinson & Co. (Pharm. Preps.)	5	Sherley, A. F., & Co., Ltd. (Dog and Cat Medicines)	ix	Wyleys, Ltd. (Pharmaceuticals) ..	Cover
Olley, C., & Sons, Ltd. (Corks)	41	Sherman, J., & Co., Ltd. (Chemicals)	iv	Yadil Products (1925), Ltd.	xxi
Ondura Tyre Works (Re-treading) ..	xx	Shoppee, A. C., Ltd. (Weighing Machines)	xx	Youldon, F. (Bottles)	40
Onzo, Ltd. (Ointment)	xxvi			Zeal, G. H., Ltd. (Clinicals)	xii
Oppenheimer, Son, & Co., Ltd. (Robo- leine)	19			Zeals Asthma Fluid & Atomizer Co., Ltd.	34
Orridge & Co. (Valuers, &c.) .. Col. Supp.				Zendix Electric Co. (Electric Hair Brush)	30



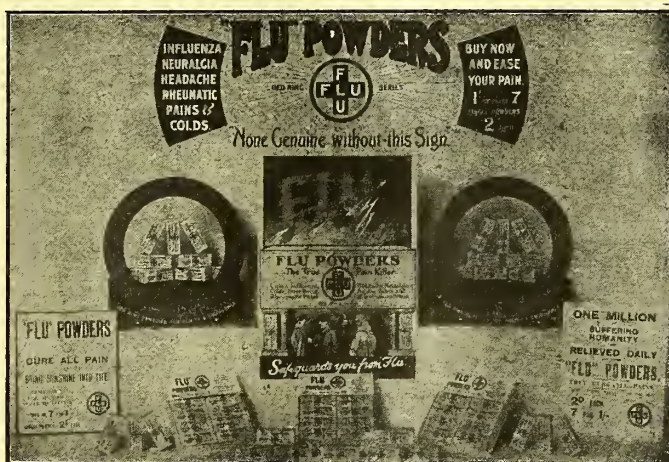
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CUPAL NEWS

FEBRUARY 2nd, 1929

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2. Applications for window display material to be made on the printed form below before April 30, 1929.
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4. Usual bonus terms for window display effective for this Competition.

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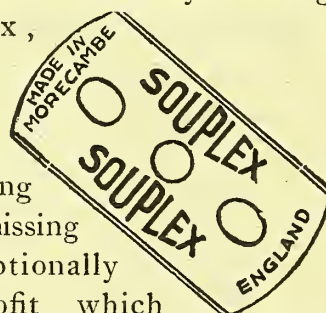
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PROFIT
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MORECAMBE**

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for
2/6
YOUR
PROFIT
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Maw's Page

"Parex"

The hot water bottle with the original display.

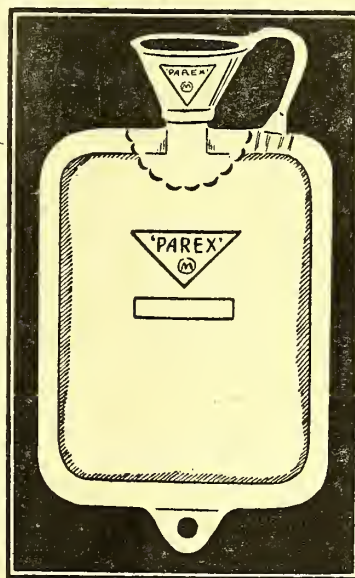
"Parex" hot water bottles are now a feature of every progressive pharmacy, a noticeable feature, a feature it is impossible for the customer to miss. There are two reasons for this, the pharmacist's knowledge of the satisfaction and profit to be gained by selling "Parex" bottles and the unique method of packing and display.

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Lastly, he knows that "Parex" bottles are sold to pharmacists only—not to all and sundry outside competitors.



Details and prices of the full range of "Parex" grey and "Parex" super-red bottles will be found on pages 155-157 of our Sundries Price-list.

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Aldersgate St., London,
and Barnet.





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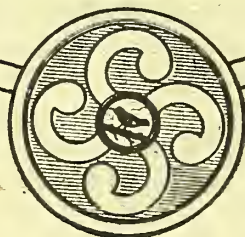
Show the goods, not a picture of them. Room for seven tins, each helping sales of the others. A delightful series of attracting colours.

The Ointments are all guaranteed B.P., and like the Toilet Creams are of the purest quality.

WRITE FOR PRICES.

Selling Card with one gross assorted if required.

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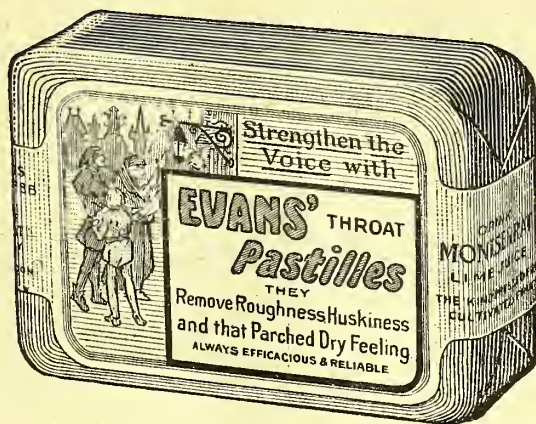


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For wrinkles.	
LIQUID NAIL POLISH 10/-	1/-
Brilliant and lasting.	

Stocked by ALL Wholesale Houses.

FOREIGN AND COLONIAL DEPÔTS AND AGENCIES.

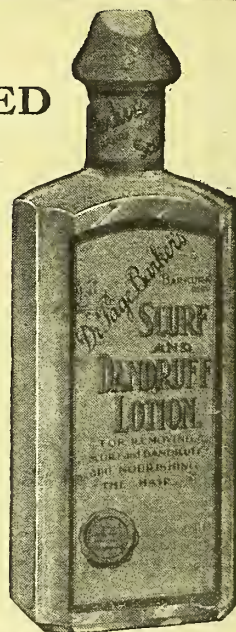
South Africa: LENNON, LTD., Cape Town, etc.
SIVE BROS., & KARNOVSKY, LTD., Johannesburg.
India: FRAMJEE & SON, Bombay.
A. L. CHOUDRY, Calcutta.
New Zealand: SHARLAND & CO., Auckland and Wellington.
Denmark: KARL, SCHULTZ & CO., Copenhagen.
Irish Free State: MAY, ROBERTS & CO., LTD., Dublin.

Every Bottle is GUARANTEED

EVERY bottle of Dr. Page-Barker's Scurf Lotion bears a positive guarantee that it will eradicate scurf or the purchase price will be refunded. This makes it the easiest to sell of all hair and scalp specifics. And the profit is handsome.

18/- per Doz.
Retail - 2/6

With every order for 3 dozen you get three 2/6 bottles as bonus, handsome metal show-stand, and attractive showcards.



Dr. Page-Barker's Scurf Lotion

Thos. CHRISTY & CO., 4-12 Old Swan Lane, LONDON, E.C.4.

"ODENTIC" PLATE BRUSH

Regd. No. 417637.

From all
Wholesalers.

Counter Display Box with every 3 dozen.

Manufacturers:

W. R. Speer & Son

(EST. 100 YEARS)

215 DALSTON LANE - - LONDON, E.8

CHEMISTS—DRUGGISTS! INCREASE BLADE SALES AND PROFITS

COST
YOU

8/-

Per Gross
Post Paid
with FREE
BONUS
of 3 doz.
blades to
each gross.

Attractive
Showcards
Supplied.



RETAILS

1/6
Dozen

Every Blade
Guaranteed
Hand-
Honed.

The Blade
To Suit
"EVERY"
MAN'S"
Pocket and
Face.

Free testing sample gladly sent on request.

WRITE AT ONCE to authorized distributors:—

L. FRANKENBERG, 125 Houndsditch, LONDON, E.1

'Phone: Avenue 8846.

'Grams: "Uzecarnos, Ald., London."

'flu!

**Run down this list
and stock up against
the demand**

*Sell your customer a complete treatment
instead of a "Bottle of Medicine"*

When they ask for:

Offer them also:

Prices quoted are per dozen.

Cold and Influenza Mixture.

P.J.F. 3664, 6 oz., 10/6. Cartoned, 11/-

P.J.F., 2852, 4 oz., 5/3; 6 oz., 6/3; 8 oz., 7/3

Ammoniated Quinine.

1 oz., 5/6; 2 oz., 8/6; 4 oz., 13/-

Ammoniated Quinine Capsules.

m. 30 24's 8/3 36's 11/6.

m. 60 " 9/- 36's 12/9.

Ammoniated Quinine Tablets.

1/2 dr. 25's 4/3 50's 6/3

1 " " 5/- " 8/-

Ammon. : Quin. : c. Cinnamon.

1 oz. 6/- 2 oz., 9/-

Capsules m. 60, 24's, 9/6 36's, 13/-

Cold Cure Tablets. P.J.F. 2136.

20's, 4/6; 40's, 7/-

Ayrton Atomiser.

each, 4/-

Dr. Monroe Atomizer.

each, 3/-

Disinfecting Spray "Cinadora"

For Sickroom, Shops, Cinemas, etc.

1 oz. 4 oz. 8 oz. 16 oz.

Doz., 10/- 30/- 48/- 84/-

"Dispello" Catarrh Snuff per doz. 4/6

"C.E.M." Inhaler. Iodised Cinnamon,
Menthol and Eucalyptus.

Box of 6, or carded, 4/- per doz. 7/6

Blanchet Handkerchiefs.

50 for 1/- 8/-

Crepe Handkerchiefs.

50 for 6d. 4/-

Pine Inhalant.

Cartoned 7/6

Glycerine and Thymol Compound.

4 oz. 6 oz. 8 oz. 12 oz. 16 oz.
Doz. 6/- 7/- 8/- 12/- 14/-

Tin Pump Sprays (Fig. 26/1095).

From 12/6 doz. to 8/6 each.

After the 'flu

Tonic Tablets, cartoned, 30's. Per dozen 7/-

Phos. and Quin. Tablets, decorated tins. 24/- 36/- 72/- 4/- 5/- 8/6.

P. & Q. (Phosphorus and Quinine) Tonic. Cartoned, 1/2 oz. 6/-

Orange Quinine Wine. Rep. Quarts, per doz., 21/6; Rep Pints, per Doz., 13/-

Special Packing for Export—Prices on request.

AYRTON, SAUNDERS & Co. Ltd.

34 Hanover Street

Liverpool, England

Estd. 1777

WE EXHIBIT
AT THEBRITISH
INDUSTRIES
FAIR3RD MONDAY
IN EVERY
FEBRUARYBUY
BRITISH
GOODSSELL
BRITISH
GOODS

VISIT

BRISTOW'S**STAND No. M56 (WHITE CITY)
BRITISH INDUSTRIES FAIR****February 18th to March 1st**A comprehensive exhibit of ready selling, finest quality
**TOILET SOAPS, PERFUMERY AND TOILET
REQUISITES**of world-wide appeal to the consumer, showing an excellent margin of
profit, with assured repeat sales. Every line is backed by attractive
display material.**LET US KNOW YOUR REQUIREMENTS—WE
CAN FULFIL THEM.***Export Buyers will find a visit of inspection to their
advantage. Fullest particulars free on request from***T. F. BRISTOW & CO. LTD.**
Colindale, Hendon N.W.9.*Telephone :*
Colindale
6474.*Telegrams :*
"Floralium,
Phone,
London."**ESTABLISHMENT BRISTOW**

A GOOD SALESMAN for GOOD PASTILLES

THE new Display Stand for "Emulsion" Pastilles in "Marble" Tins, although smaller than its popular predecessor, is equally effective and convenient for counter use. It is 16" high and occupies 13" x 4½" counter space. The tins are removable only from the back and a safety line indicates when it is necessary to refill. The stand is in harmony with the well-known display outers—black, white and gold.



Good pastilles, well displayed, are more than half sold, and every detail of this series has been carefully evolved to meet the requirements of both sides of the counter. Your customers will be quick to realise that the extra care in presentation is the outward and visible sign of extra care in preparation. In addition to the titles illustrated the following are available for this display :—

BRONCHIAL, CHILDREN'S THROAT
MENTHOL & EUCALYPTUS

Display stand free with orders
of 6 dozen and upwards

To EXPORT BUYERS—All orders and enquiries should be addressed to our Sole Export Agents
Wm. ALFRED JONES Ltd., West India House, Liverpool.

THOMAS KERFOOT & CO. LTD.
BARDSLEY VALE, LANCASHIRE,
& Bardsley House, London, N.1
ESTABLISHED 1797.

C/931

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IMPORTANT CHANGE IN SALES POLICY



LYSOL LTD. announce that on
and after FEB. 15th, 1929, all
orders and enquiries for HINDS
Honey & Almond CREAM and
MARSHOL should be addressed
to RAYNES PARK, LONDON,
S.W.20, and not to Beecham-
Veno Distributing Depôt, as at
present.

ON AND AFTER FEB. 15th

all orders directed as above will
receive prompt and careful
attention

LYSOL LTD. LONDON, S.W.20

£6 of ROBOLEINE for £5

Any chemist who undertakes to make a fortnight's window display of Roboleine and places an order for £5 net value (made up in any sizes) will receive an additional £1 worth free, together with a supply of samples, literature and display matter. The consignment will be sent carriage paid, in a free case.

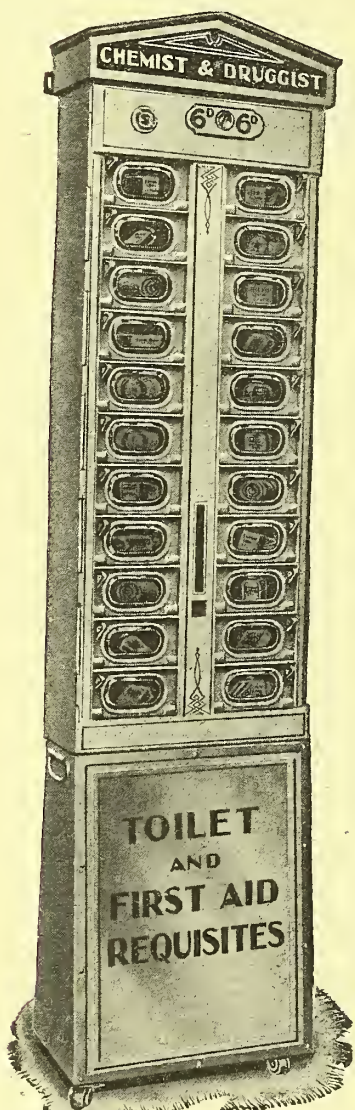
Roboleine has no opposition to overcome. It has been on the market 22 years and has an established position with Doctors and with the public. And this winter it is being advertised as never before, in all the great national dailies, in the leading provincial newspapers and in a long list of Women's papers. 127,684,000 large advertisements will appear between the beginning of October and the end of April.

Roboleine is going to be a best-seller this winter. Now is the time to make sure and get a good share of the increased trade.

Roboleine

CONCENTRATED NOURISHMENT
IN EVERY SPOONFUL

Don't buy Mushrooms!



This is the B.A.V. Universal Vending Machine. Supplied in 22, 44, 66 or 88 Compartment Sizes.

AUTOMATIC Vending Machines and Companies are springing up, like mushrooms—almost every night—all over the place. The wise buyer will remember that with such machines as with all other mechanical products apprentices cannot be expected to produce perfect products.

**It's experience
that counts!**

B.A.V. machines have 28 years of solid experience behind them. The most excellent time proved devices protected by British Patents are incorporated in our machines. Built in the largest and best equipped works in Great Britain—staffed by expert engineers and mechanics with over and above all a technical staff practised for

**more than quarter of a
century**

in producing mechanisms to protect your takings.

The Proof

It is easy for new arrivals to make big claims but we invite you *in your own interests* to test our mechanisms against the best you can find elsewhere. Send a P.C.—send it now—or better still call at our showrooms and test our machines on the spot.

Remember :— We are the Sole Proprietors of the latest British Wistoft Patent Nos. 272354, 282586, 286923, 288448, 292319, 294032, 294807, 295309, 296750 (other Patents Pending), which combine to form the finest of all protective mechanism.

We are prepared to quote for Automatic Vending Machines in quantities to deliver any type of suitable Product.

All orders dealt with in strict rotation.

BRITISH AUTOMATIC VENDORS, LTD.
60 HOLBORN VIADUCT . . . LONDON, E.C.1



THEY do the "trick." That's why the sales of "Moorland's" are always increasing. In other words, they actually do give relief to sufferers from digestive troubles. They are so utterly dependable that customers come back again and again for them. The original superior formula has a lot to do with that. You see how quality tells. And we are keeping up the same high standard, that's why "Moorland" Heart Shape Tablets are by far the best of their kind on the market to-day

Order now—and keep busy. One Doz. 4/6. One Gross 51/-. Retail 7½d.

Write to W. B. CARTWRIGHT LTD. RAWDON NEAR LEEDS



**KRASKA
NAIL
POLISH**
Retail at
1/-, 1/6, 2/6



KRASKA NAIL CULTURE



**KRASKA
CUTICLE
REMOVER**
Retail at 1/9

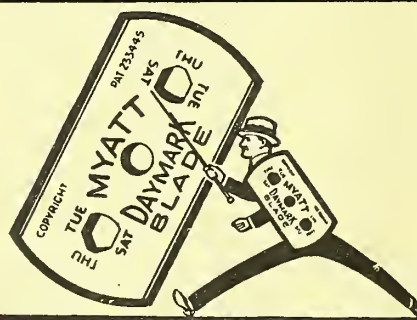
BACK TO PRE-WAR PRICES.—50% PROFIT

On KRASKA LIQUID NAIL POLISH and allied Manicure Specialities on the Revised Prices
Operating from MARCH 1st.

	Old price per doz.	New per doz.	Old price Retail	New Retail		Old price per doz. boxes	New per. doz.	Old price Retail	New Retail
Kraska Liquid Nail Polish	9/6	8/-	1/2	1/-	Kraska Cuticle Extractors	—	18/-	—	2/-
" " " "	12/6	12/-	1/8	1/6	(12 in box)	—	—	—	—
" " " "	19/-	18/-	2/9	2/6	" Nicotine Remover	—	15/-	—	2/-
" (in polished boxwood case for travelling)	—	30/-	—	4/6	" Cuticle Cream	10/-	8/-	1/2	1/-
" Cuticle Remover	—	15/-	—	1/9	" Hand Balm	—	10/-	8/-	1/2 1/-
(with Patent Extractor)					" Bleaching Fluid	10/-	8/-	1/2	1/-

SELL OUT THE OLD STOCKS, GET IN THE NEW ! Customers will like the new even prices.
SPECIAL OFFER on £1 minimum parcels, Cash with order :
13 to the dozen, with show matter, including Day-and-Night Sign, which fixes on window or stands on shelf.
ALL CARRIAGE PAID. **STOCKS HELD BY ALL WHOLESALERS.**

Manufactured by The KRASKA CO., LTD., 65 PORTOBELLO ROAD, LONDON, W.11



POINTING THE WAY TO Quicker Shaves—Bigger Sales

The Myatt Daymark Man is the Star in the big new advertising Campaign for Myatt Blades. He points the way to smoother shaving and to better profits for you. Every year more dealers are profiting by the popularity of Myatt Blades. Let them increase YOUR trade. Display material free from your wholesaler.

MADE IN ENGLAND

MYATT
PATENT BLADES
FOR GILLETTE TYPE RAZORS ONLY.

Sole Manufacturers :
W. J. Myatt & Co. Ltd.
Contractors to H.M. Government.
Argent Works, Birmingham
London Showrooms :
94 HATTON GARDEN, E.C.1

5 Blades 1/3
less 33 1/3 %
showing a Profit of
50% ON COST

HAIR

BURMAN
CLIPPERS

For **SURGICAL**
and **VETERINARY**
PURPOSES.

HAIRDRESSERS' CLIPPERS

The British-Made
Hair Clipper.



Dainty Shingling
Clippers for
Ladies' use.

BURMAN & Sons, Ltd., BIRMINGHAM

If you would protect your customer from

INFLUENZA

persuade him to use a

DEVILBISS SPRAY

BOTH NIGHT AND MORNING.

You can supply him with one
complete with solution for **4/6**

Ask us about this—

THE DEVILBISS CO., LTD.,
WEST DRAYTON : : MIDDLESEX
And 27 Old Bond Street, W.



This effective display matter
is free with—

Cusson's WHITE CROSS BABY POWDER

A fine product whose merits quickly build up repeat sales and which yields the Pharmacist a protected profit of over 40% on selling price.

RETAIL PRICE . . . 10½d. per tin.

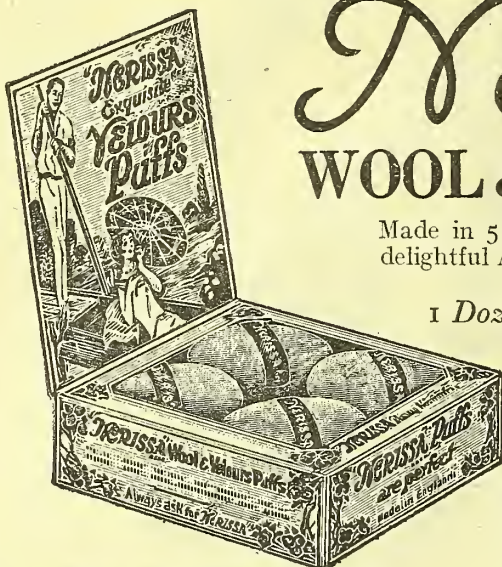
TRADE PRICE . . . 6/- per dozen.

If not stocked write for free 10½d.
tin and satisfy yourself that it
is definitely superior to all
other brands.

Cussons

KERSAL VALE, MANCHESTER.

Don't fail to see these at our Stand at the **BRITISH INDUSTRIES FAIR.**



NERISSA^{Regd.}

WOOL & VELOURS PUFFS

Made in 5 sizes, 2, 2½, 3, 3½, 4 inches, in White and delightful Art Colours, each in Cellophane Envelope.

1 Doz. in Display Carton in Colours (as shown).

The **GOODS** are **PERFECT.**
The **PRICE** is **RIGHT.**
The **DISPLAY** SELLS THEM.

Order a trial box of 1 dozen from your Wholesale House to-day and a box of 2 dozen Face Cloths at the same time. We guarantee that you will be satisfied.

Watersprite
MADE IN ENGLAND

SOLPORT
BROTHERS LIMITED

GOSWELL ROAD - - LONDON, E.C.1

NURSE HARVEY'S MIXTURE

A safe, simple and reliable remedy for Children's Ailments is advertised so extensively in the daily and weekly Press as to bring mothers to the retailer without effort on his part.

The selling has been done before the mother reaches the chemist, and, having supplied her, it is only common sense to claim she will buy other family necessities from him. Moreover, the continuous demand for it produces a quick turnover.

For Direct Terms apply to—

OSCAR SCRUTON & CO., YORK

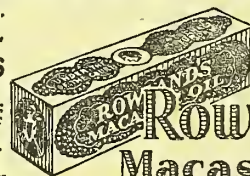
Tried & Proved

Rowland's Macassar Oil is no new preparation; it has been used all over the world for more than 136 years and everywhere it is held in the highest esteem. It is guaranteed to

contain no
injurious
substance

P.A.T.A.
3/6, 7/-
& 10/6

Red for
dark hair;
golden for
fair or
grey hair.
From all
Wholesalers



**Rowland's
Macassar Oil**

A. ROWLAND & SONS, Ltd., 112 Guilford St., London, W.C.1
S.M.T.

An attractive proposition—

Send
for a
Sample
to

A superfatted skin soap of exquisite perfume.
A beautiful outer wrapper with YOUR OWN NAME.
An inner wrapper with guarantee of purity.
A first quality toilet soap with creamy lather.
A competitive price:—33/6 gross less 2½% discount for cash 14 days.
£2 orders carriage paid. Free Cases.

R.F. WHITE & Co. Ltd., Grove Mills, London Rd., Mitcham.

POTTER & CLARKE

Manufacturing
Chemists

The Sign of
The Winged Lion



Registered
Trade Mark

Drugs LIMITED
Merchants

Of proved efficacy!



Look to your stocks!

POTTER'S CATARRH PASTILLES are of outstanding merit, and the public confirm this statement. They are again being widely advertised to an ever-growing consumer population all over the world, and the demand is keen. There is good business and good profit for YOU in this line.

P.A.T.A. 1/3. 11/- per doz.
In boxes of 1/2 Dozen.

Phones:
Bishopsgate.
4761, (5 LINES).

Potter and



Clarke Ltd.

Grams:
Horehound,
Phone, London.

60-64 ARTILLERY LANE, LONDON, E.1.
MANCHESTER: 24 Luna St., Gt. ANCOATS.

★ **B&C** **SERVICE**

Importers of French,
American, Colonial
and European Medi-
cines, Perfumery and
Toilet Preparations.

★ All the latest American
and European Perfumes
and Toilet Goods in stock.

★ Fullest Discounts allowed.

★ Orders delivered anywhere
in London and its environs
by express motor service.

★ Rail orders despatched
same day as received.

★ Performance — not
promises.

Telegrams :
"Pomade, Smith, London."
Cables and Marconigrams :
"Alluwant, London."

Telephone :
Clerkenwell 5906 (private
exchange).

Established 1777.

BUTLER & CRISPE

Patent Medicine Vendors.
80 & 82 CLERKENWELL ROAD

Druggists' Sundriesmen.

Toilet and Perfumery Agents.
LONDON, E.C.1



LET StaffAllens handle your Peppermint problem. The very wide range of qualities available of this predominating flavouring oil makes it essential that users should standardise their purchases.

StaffAllens market a grade of Peppermint for every purpose. Prices are competitive; qualities are of an unvarying uniformity.



StaffAllens

are
Growers and Distillers
of
English Peppermint,
and

Importers, Rectifiers & Blenders
of

Every variety of Foreign

PEPPERMINT OILS

Write for samples and prices
to

STAFFORD ALLEN & SONS, LIMITED,
COWPER STREET, LONDON, E.C.2
Telephone: Clerkenwell 2100 (5 lines)

NATIONAL PUBLICITY

for



By Appointment
to their Majesties
The King & Queen
of Spain

FROM FEBRUARY 1st
LARGE SPACES IN THE

Daily Sketch
AND
Daily Mirror

FULL PAGE & COLOUR
PAGE ADVERTISEMENTS
IN EACH OF THE
FOLLOWING PAPERS:

Woman
Good Housekeeping
Woman's Journal
Nash's Magazine
Punch
Bystander
Vogue
Eve
Sketch + *Tatler* + *Lady*
Queen + *Graphic* + *Sphere*

EVERY
SINGLE TABLET SALE
BRINGS 39% ON
TURNOVER

You make over 4½d. on every single tablet. Gal retails at 1/- per tablet, 2/9 per box of three. The price to you is 11/- per dozen tablets less 33½% discount P.A.T.A.

Order through your usual wholesaler and ask for display material



*the Toilet Soap that
few women can resist*

THE combined circulation of all the papers carrying advertisements gives a total of 23 million SALES MESSAGES WORKING FOR YOU—creating sales for you—at the unusually large profits Gal offers you.

Make this advertising Campaign YOUR Campaign and take your profits from the many thousands of pounds we are spending to bring you business—you have only to show Gal to sell it, for sales are proving that Gal is a toilet soap that few women can resist.



PERFUMERIA GAL (LONDON) LIMITED
76 STRAND, W.C.2. Telephone: TEMPLE BAR 4662

FS/207

ANNOUNCING-

Odol

Mouthwash is now obtainable in a size retailing at eighteenpence.

The introduction of this new pack means a tremendously widened market for Odol, a greater demand and consequently increased profits for the Chemist alert enough to make ready by getting supplies of the new size into his shop.



NEW SIZE

TO RETAIL AT



Aldwych

Odol will be announced to the public in the National Daily Press—throughout the whole country. Thousands who were previously debarred by price from using this famous mouthwash regularly will want to buy it. By keeping up your stocks; by making window and counter displays, you can ensure for yourself a full share of this new business.

ODOL 1/6 SIZE

(Trade Prices)

1 Dozen ...	13/6 per Doz.
3 Dozen ...	13/3 per Doz.
6 Dozen ...	13/- per Doz.

Cash Discount
2½% 30 days.

Carriage Paid
(minimum 1 doz.)

CRANBUX LIMITED OF NORWICH

To-day's best investment—a case of

R.S.M

(Reigate Standard Mint)

English re-distilled and blended PEPPERMINT OIL



White, Tomkins & Courage Ltd.
Reigate, Surrey

Telegrams : *Esswhite, Reigate.*

Telephone : *Reigate 480.*

Chemical Works "Flora"
DUBENDORF, ZURICH - SWITZERLAND

Manufacturers of

**SYNTHETIC & AROMATIC
CHEMICALS**

SAMPLES ON and
APPLICATION.

CHLOROPHYLL
OIL AND SPIRIT - - SOLUBLE.

STOCKS HELD
IN LONDON.

Samples and particulars from—

CHAS. ZIMMERMANN & CO. (Chemicals), LTD.
St. Mary-at-Hill, London, E.C.3

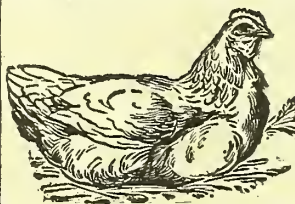
**THE
Chemist and Druggist
SUPPLEMENT**

is an infallible help when you want
to buy or sell a business, secure an
agency, an assistant or a situation, or
SELL SURPLUS STOCKS.

*The Tariff is printed on the front cover of the Coloured
Supplement.*

Address all inquiries to—
The Publisher: **THE CHEMIST AND DRUGGIST,**
42 Cannon Street, LONDON, E.C.4.

Increase Your Profits



**WATER
GLASS**

FOR
PRESERVING EGGS

Special Printed Matter supplied.

WRITE NOW FOR LISTS, TERMS, &c.
TOMLINSON & HAYWARD, LTD.
(Dept. W.) 51 NEWLAND, LINCOLN.

ESSENCES & SYNTHETICS LTD.

WILLIAM C. SLATER, Managing Director.

4 CARLISLE AVENUE, FENCHURCH STREET, LONDON, E.C.3

Royal 0290.

Essynthet—Ald—London

A few of our latest Creations :—

AMBREINE

A sweet Oriental perfume with a delightfully delicate floral nuance.

LILY=OF=THE=VALLEY

True to Nature; even in its last traces on evaporation.

VICTORIA VIOLET

A very successful composition; a necessity to the creative perfumer.

PARMA VIOLET

A standard Violet; indispensable in the absence of the natural flower oil.

WALLFLOWER

A beautiful reproduction of the Old English Wallflower,

ROSE

An excellent substitute for Bulgarian Otto.

JASMIN

A composition giving the pungency as well as the ever-popular floralcy of Jasmin flowers.



Of the highest possible concentration, and hence very economical in use; perfectly soluble; do not discolour. Suitable for handkerchiefs, perfumes, face powders, vanishing creams, brillianines, toilet waters, bath salts, soaps.

Samples cheerfully sent by return of post.

Schimmel & Co.

A.G.

PUMILIONIS PINE OIL

CINNAMON BARK OIL

Genuine

SIBERIAN PINE OIL

PEPPERMINT OIL

All grades

Sole Distributors for United Kingdom:

Messrs. FREDK. BOEHM, LTD., 17 Jewry Street, LONDON, E.C.3.

Scottish Office: 140 West George Street, GLASGOW.

*Have you Sent
Your Statements
out yet?*

If not, why not include a dainty perfumed sample book of PAPIER POUDRÉ, to your best customers? They will appreciate this fragrant and useful gift.

WITH AN ORDER FOR 6 DOZ. 8d. OR EQUIVALENT IN OTHER SIZES, WE WILL SEND 72 SAMPLE BOOKS EACH CONTAINING 18 LEAVES OF PAPIER POUDRÉ (ASSORTED TINTS) EXACTLY AS SUPPLIED IN OUR REGULAR BOOKS, AND ALSO ALLOW YOU AN EXTRA DISCOUNT OF—

7½ %

On condition that some books and the small Showcard are displayed in your window.

SELL ADVERTISED LINES OF QUALITY AND REPUTATION. DO LESS WORK AND MAKE MORE PROFIT.

Sole Manufacturers :—

**PAPIER
POUDRÉ**

LTD.

46 Baker Street, London, W.1

**The Blade for Stiff Beards
& Tender Skins!**

ECLIPSE
SAFETY RAZOR
BLADES

5
for
1/8



10
for
3/4

Send for free Sample Blade

Trade price shows 50% profit
on outlay or 33½% on turnover.

BRITISH THROUGHOUT AND BEST BY TEST

Order from your usual Whole-
saler or direct from the Makers:

JAMES NEILL & CO. (Sheffield) LTD.
Composite Steel Works, SHEFFIELD

E 27



**A
KEEN
BLADE
AT A
KEEN
PRICE**

The Blade that SELLS as it SHAVES—
“LIKE GREASED LIGHTNING!”

Obtainable from all Leading Wholesalers.
Inquiries from Genuine Wholesalers only are Invited.

Dept. C.D. “Wanie” Distributors:
c/o ROEBUCK'S ADVERTISING SERVICE
Salisbury Square House, Salisbury Sq., Fleet St., London, E.C.4

G. B. KENT & SONS, LTD.

Are known the World over as
the Largest Manufacturers of

**BEST
BRITISH
BRUSHES**

Please write for full Particulars to—

75 FARRINGDON ROAD, E.C.1.

*If your electric light
bulb could speak
it would say —*



An electric lamp without a Holophane Reflector is like a car-wheel without a tyre—it cannot possibly develop anything like its full efficiency.

Holophane Reflectors have the finest reflecting surface in the world, and do not deteriorate with heat or age.

Every Holophane unit is the result of the scientific application of the laws of light, and is the most perfect it is possible to obtain.

A shop lighted by Holophane Reflectors must be better lighted than any other. It is more pleasant to be in, shows its stock better, and permits of more efficient service being rendered to its customers.

Holophane Engineers will design a complete scientific system of lighting for a window, a department, or an entire store, without cost or obligation.

Get in touch with Holophane to-day.

Write to
HOLOPHANE
"the firm that made lighting a science"

and ask for a free copy of their twenty-four page illustrated booklet on *Shop-Lighting*. Every important branch is dealt with including Window-Lighting,

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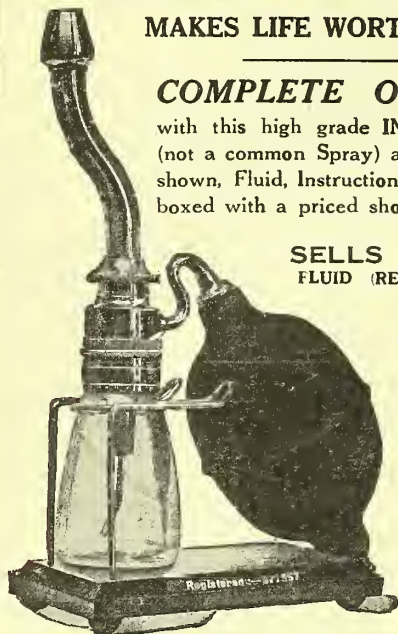
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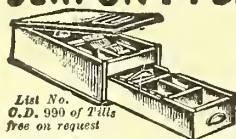
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Improved 16 x 8 1/2 x 6 ins.
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"YEAST FOR VITAMIN B."

Yeast specially prepared for medicinal
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GUARANTEED ABSOLUTELY PURE.

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"Abdine" is the most popular Health Drink. Perfectly safe for all ages.
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We specialise
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A good Bottle at a low price

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CANNON ESSENCES, round, heavy.

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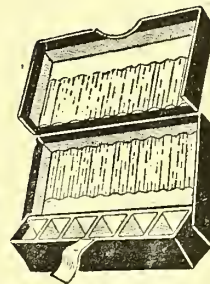
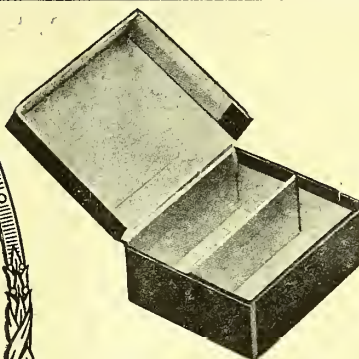
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We specialise in the manufacture of small boxes for chemist use, and our range of these boxes is large and varied.

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A sound bottle is a good investment—cheap, badly-made bottles are dearest in the long run.

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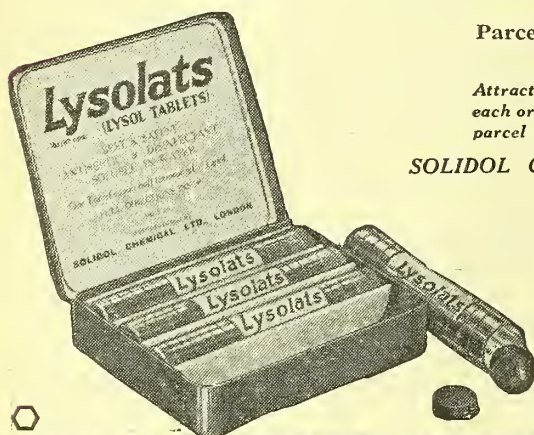
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The safe form of lysol

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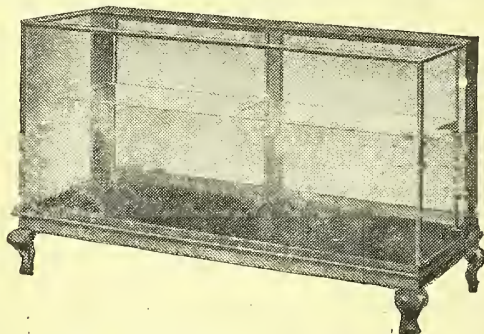
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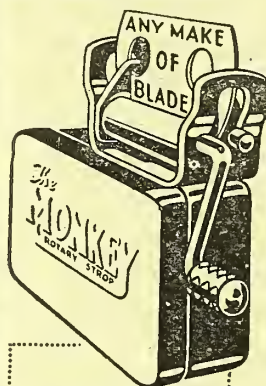
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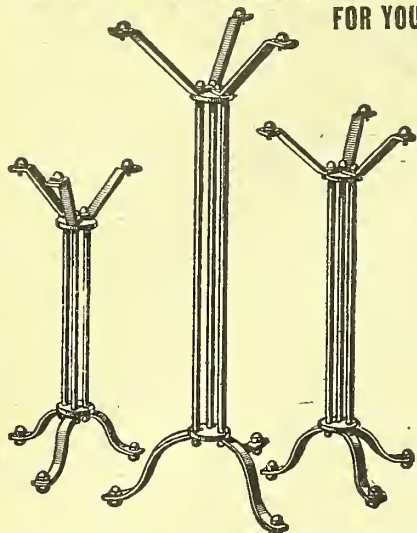
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No. CD/SF 2620. A new registered design in METAL TRIPODS.
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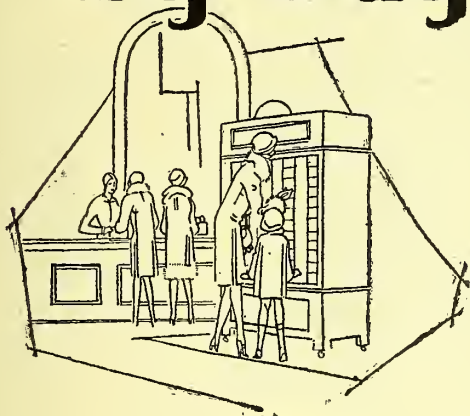
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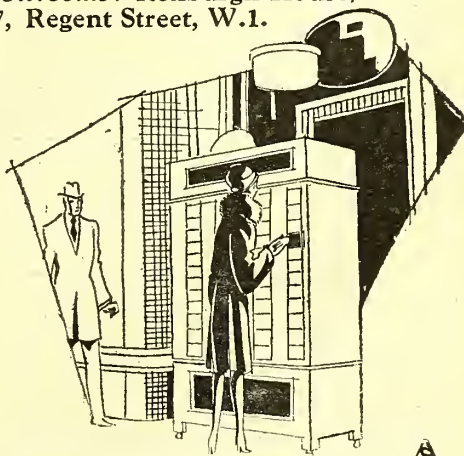
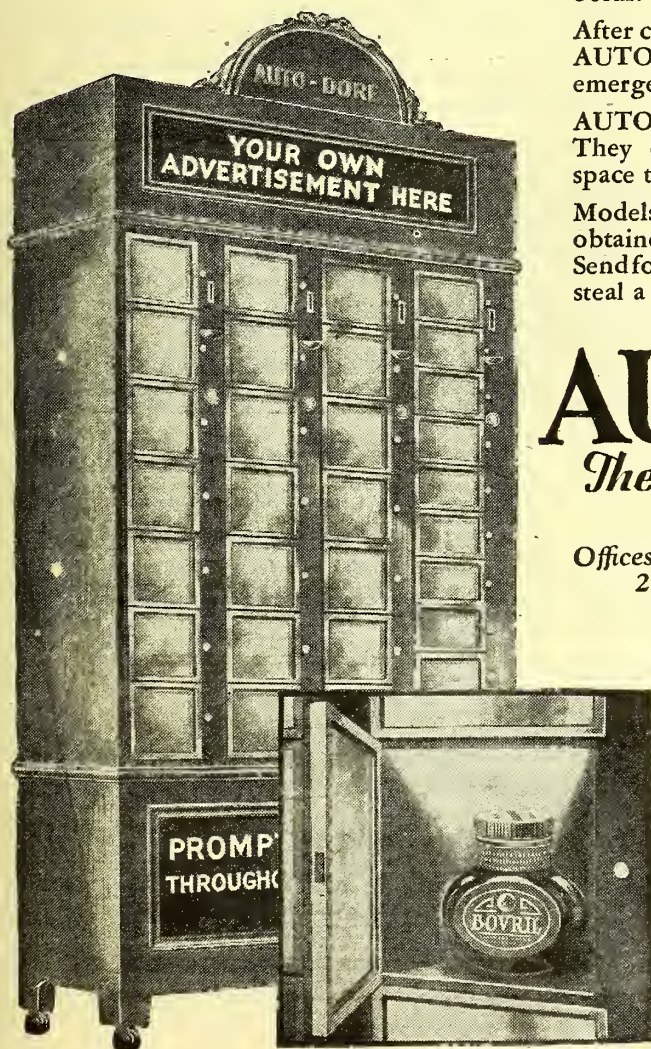
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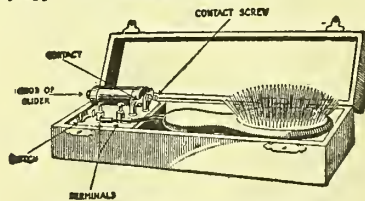
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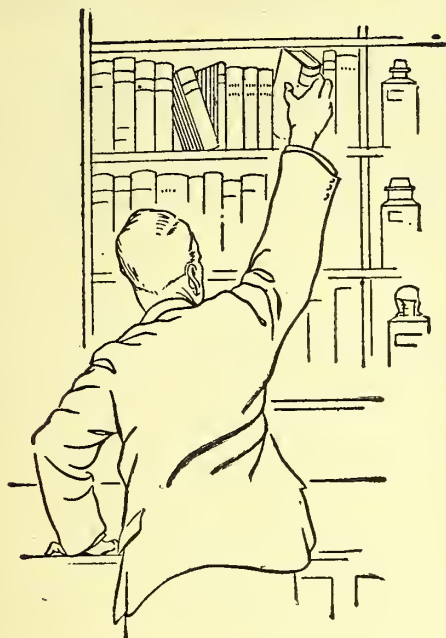
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The conditions imposed by the Dangerous Drugs (Consolidation) Regulations (1928) on the use of preparations containing any quantity, however small, of diamorphine (heroin) must necessarily restrict the use of such preparations.

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Contents

No. 5

Series 2556

Vol. 110

	PAGE		PAGE
Agricultural Notes..	128	Fluossilicates in Agriculture	124
Gooseberry Mildew	127	Foes of Rose	136
Birmingham Analyst's Report..	117	Information Department	130
British Pharmaceutical Conference	123	Insurance Act Dispensing	141
British Trade in Fertilisers	139	Irish News	117
Business Changes	121	Legal Reports	120
C. & D. Commercial Compendium	149	Mercury in Plants	126
C. & D. Retail Price List	129	New Companies and Company News	120
Cannabis Indica and D.A.	140	New Fertilisers	124
Coming Events	123	Observations and Reflections	131
Corner for Students..	117	Personalities	130
Correspondence: Letters	146	Pharmaceutical Society of Great Britain: Examination Results	119
Dispensing Notes..	147	Branch Meetings..	119
Legal Queries	148	Preserving Wood	137
Miscellaneous Inquiries	148	Retail Pharmacists' Union	118
Subscribers' Symposium	148	Retrospect	148
Deaths	130	Scottish News	116
Drug Fund Shortage	118	Spray Liquids	135
Editorial Articles: English Grown Pyrethrum	132	Trade Marks	121
British Copper Sulphate	133	Trade Notes	129
Machine Made Lemon Oil	134	Trade Report	142
English News	115	Weed Killers for Garden Paths	125
Festivities	122	Westminster Wisdom	134
		Wills	121

Revised Cards

THE coming into force of the Shops (Hours of Closing) Act, 1928, has necessitated a revision of the C. & D. card originally prepared in 1912 for exhibition in pharmacies after closing hours. The revised card, measuring 14 in. by 10½ in., contains on one side the prescribed notice, and on the other side the relevant provisions of both Acts so far as they affect the business of a chemist and druggist. Two cards are required for each shop. Cards may be obtained from the Subscription Department of THE CHEMIST AND DRUGGIST, 42 Cannon Street, London, E.C.4, price 1s. each, three cards for 2s. 9d., post free in either case.

The C. & D. Poisons Card No. 2, containing the extended list of poisons, has also been revised in accordance with recent changes in statutory requirements, and is on sale at 1s. each, or three for 2s. 9d., post free in either case.

English and Welsh News

The Editor will be obliged if subscribers will send him marked copies of newspapers containing items of interest for insertion in this or other news sections.

Trading at Clinics

At a meeting of the Crayford Urban Council, on January 22, the health committee recommended that, as an experiment, small quantities of cod-liver oil and malt and Parrish's food be purchased for sale at the Council clinics. Councillor Ockwell said that if required the commodities should be provided and not retailed. The clinics served a good purpose, but they did not want them polluted with communal trading, and, once started, they did not know where it would stop. The chairman said it was not a question of trading or profit, but a means of making sure that mothers got what was recommended. Councillor Ockwell: We are not the Guardians, and we should not usurp their powers. Councillor Lyle moved as an amendment that the clinic officials be instructed, in case of necessity, to issue an order on a tradesman, which would ensure better service and better goods being provided. Tradespeople had their share of rates to pay, and it was unfair to set up a business in the clinics to cripple them. The chairman said it was intended to make provision for those who came under the scale, and if councillors were not prepared to help such they were not prepared to help those who were down and out. Councillor Lyle said the chairman had given a misleading interpretation of his amendment. The recommendation of the committee was the thin end of the wedge to introduce municipal trading. The amendment was defeated.

Inquests

An investigation was concluded by the North Riding deputy coroner, on January 22, regarding the death of Edward Carter, Cloughton, described as a farmer and veterinary surgeon, who had died suddenly. A *post-mortem* examination showed that the stomach contained sufficient strychnine to kill five men. Poison-registers of chemists in Scarborough and Whitby failed to show that strychnine had been supplied to Carter or his relatives. An open verdict was returned.

Evidence of ½ gr. of strychnine and 1.2 gr. of quinine sulphate having been found in a baby's stomach was given at the adjourned inquest on January 25, on Doreen Winder, Armley, Leeds, aged twenty-three months. At the opening of the inquest evidence had been given that the mother had received at the Armley Babies' Welfare a packet of tablets prescribed for her by a doctor, and these had been placed in, under, or behind an ornament in the room. There was nothing on the packet or on the tablets to indicate that they contained poison. A lady dispenser from the Babies' Welfare said she put up the tablets, and was quite sure that when she handed them to Mrs. Winder she warned her about their containing poison. Addressing the jury, the coroner said that the only question for them to consider was whether they should make any recommendation as to the labelling of such tablets. In returning a verdict in accordance with the medical evidence, the foreman said they suggested that all such packets given out by the dispenser should be labelled "Poison."

Birmingham

The following contributions have been made to the Birmingham Hospital Saturday Fund:—Cadbury Brothers, Ltd., £4,498 15s. 8d.; Southall Brothers and Barclay, Ltd., £705 11s. 2d.; Alfred Bird & Sons, Ltd., £357 15s. 2d.; W. Canning & Co., Ltd., £292 9s. 2d.; Country Chemical Co., Ltd., £49 5s. 3d.

Professor R. H. Yapp, Mason Professor of Botany in the University of Birmingham, died on January 22 at the age of fifty-seven. Professor Yapp was educated at Cambridge University. From 1900 to 1903 he was curator of the University Herbarium, and was secretary and later recorder of the botanical section of the British Association from 1902 to 1911. He was Professor of Botany at University College, Aberystwyth, from 1904 to 1914, and at Queen's University, Belfast, from 1914 to 1919, when he was elected to the Birmingham chair.

Leicester

Mr. A. E. Young, Ph.C., has been elected vice-president of the local Rotary Club.

Five of the successful candidates at the recent Chemist and Druggist Qualifying examination held in London were students of the Leicester College of Technology.

Liverpool

The Liverpool Pharmacy Club annual general meeting will be held at King's Café, Church Street, on February 5, at 9 p.m.

The many friends of Mr. W. J. Williams (Francis Newbery & Sons, Ltd.), who when he left Liverpool for London a few years ago was given a good send-off, will be glad to hear that he is going on satisfactorily towards recovery from an illness.

The "flu" epidemic, which is now abating, has made chemists busy; in many instances they have been working overtime in order to cope with the rush of prescriptions. Wholesale houses have also been very busy. Manufacturers of proprietary remedies have been advertising extensively in the local Press.

The members of the Birkenhead Association held their sixth annual ladies' night on January 17, at the Exchange Station Hotel, Liverpool. The guests, who were received by the president (Mr. F. C. Cooling) and Miss Cooling, included representatives of the Liverpool and Wallasey Associations, and of several wholesale houses. After dinner, an entertainment followed. There is to be a fancy dress dance at St. Peter's Hall, Rock Ferry, on February 7.

The annual children's party arranged by the Liverpool Chemists' Association was held at the Royal Institution, Colquitt Street, on January 16. The seventy guests were received by the president (Mr. John Jones) and Mrs. Jones. After tea, provided by the members of the ladies' committee, the children enjoyed games. Then followed an exhibition of conjuring and ventriloquism. The young company was duly impressed by the entrance of Father Christmas, attended by two fairies, who proceeded to distribute gifts.

Manchester

The body of Mr. A. H. Turner, chemist and druggist, Monton, Eccles, who had been missing for three weeks, was discovered in the Bridgewater Canal on January 23. It is stated that Mr. Turner had no financial worries and was to have been married shortly. At the inquest a verdict of "Found drowned" was returned.

Mr. A. E. Thorpe, 312 Great Western Street, Moss Side, writes:—"The idea of a co-operative association for pharmacy is one which has much support in Lancashire, and I should like to suggest that all who are in business in this area, and are interested in the matter, should meet at the Manchester Pharmacy Club on Wednesdays, say from 3 p.m. to 6 p.m., and discuss the question in detail. The subscription to the Club is only 5s. per annum; the address is Clydesdale House, Turner Street, off High Street, Manchester."

Sheffield

In their football match against Thursday Rangers, the chemists' team was defeated by two goals to one.

Mr. John Austen, Ph.C., has been elected vice-president of the geological section of the Sorby Scientific Society.

Mr. A. Knowles recently gave a lecture entitled "Outlines of Materia Medica" before the Sheffield Association of Junior Chemists.

Professor B. Ifor Evans, of Sheffield University, states that he knows of no other place where there is so little contact between university and city. Local chemists have for some time been making efforts to remedy the position.

A visit to the Liverpool laboratories of Evans Sons Lescher & Webb, Ltd., was recently paid by members of the Sheffield Association of Junior Chemists. After lunch, the visitors were conducted round the works by Messrs. Sendall and Turner, and at tea the gathering was addressed by Mr. Brinson and Mr. Sendall. A vote of thanks to their hosts was proposed by Mr. Oliver and seconded by Mr. Graves.

Miscellaneous

BURGLARY.—During the week-end January 26-28 the premises of Morgan James & Co., manufacturing chemists, Tudor Street, Cardiff, were entered by burglars. The articles taken include postal orders, razors, combs, sprays, brilliantine and proprietary goods. Many of the items bear the name "Rosaline Co."

LICENCE RENEWALS REFUSED.—The Public Control Committee of the London County Council refused, on January 25, the application of the British School of Selling, and, a few days previously, that of the Wallace Attwood College, for the renewal of their respective licences to carry on an employment agency. The opponent in each case was the National Union of Commercial Travellers.

IN THE COURTS.—At Dartford, on January 21, Frederick Openshaw was fined 10s. for stealing a tablet of soap, value 4½d., at the shop of Horrell & Goff, chemists.—At Marylebone Police Court, London, on December 29, Claude W. Hiscocks (57), draughtsman, Gleneldon Road, S.W., pleaded "Guilty" to obtaining the sum of £87 17s. by false pretences from Allen & Hanburys, Ltd., and was sentenced to six months' imprisonment in the second division. It was stated that the total amount thus obtained was £360 ls. 6d.

Scottish News**Brevities**

A pharmacy has been opened by Miss Mary Teunion, chemist and druggist, at Victoria Road, Kirkcaldy.

An unusual situation has arisen in regard to the estate of the late Mr. A. H. Miller, chemist and druggist, Inverbervie, who died on August 20 last. Mr. Millar, left estate to the amount of £1,000, and unless heirs can be found the money will revert to the Crown.

The annual whist drive and dance of the Dundee Chemists' Association was held on January 23. Mr. F. W. Bennett, Arbroath, presided over the company, which numbered 160, and Mrs. Bennett presented the prizes as follows:—*Ladies*: Mrs. J. Robertson, Miss Orr, Mrs. Bennett, Miss Robb, Miss Duff, Miss Young. *Gentlemen*: Messrs. Cummings, Shearer, Gow and Ramsay.

Edinburgh

Sir Alfred Ewing, Principal and Vice-Chancellor of Edinburgh University since 1916, has intimated his intention of retiring at the end of the present academic year.

Tramwaymen in Edinburgh are being inoculated with an anti-influenza vaccine. One of the large stores is providing an antiseptic mouthwash for use of the employees.

A Burns supper, under the auspices of "Blandfield Golf Club" (T. & H. Smith, Ltd.), was recently held in Haymarket Restaurant, and between thirty and forty guests attended. The chair was taken by Mr. G. F. Anderson (president). After supper, during which the haggis was piped in with the usual honours, the chairman gave the loyal toast. "The Immortal Memory" was given by Mr. A. C. Hunter, Prime Minister of the "Edinburgh Parliament," in an able and impressive speech. "Our Guests" was given by Mr. R. Pringle, and was replied to by Mr. Hunter. "Blandfield Golf Club" was given by Mr. G. H. Chisholm, and replied to by Mr. Anderson. An enjoyable programme of songs and recitations was sustained by Messrs. Allan, Blackwood, Dickson, Mair, Marshall, Morrison and Pringle; Mr. R. C. Warden played the accompaniments.

Glasgow

William Hill & Co., Renfield Street, Glasgow, have been appointed Scottish representatives for Genatosan, Ltd.

Mr. J. H. Capel has just been appointed manager of the Glasgow area on behalf of Armour & Co., Ltd., whose local address is 223 Ingram Street, Glasgow.

The present epidemic of influenza in the city has produced a number of complaints about the difficulty of procuring medical supplies after shop hours and on the half-holiday. Representatives of the Glasgow Corporation have held a meeting with the local branch of the Scottish Pharmaceutical Federation, and as a result the list of chemists with their private and business addresses is to be revised. Copies are being distributed to each police or other public office.

Irish News

Pharmaceutical Society of Ireland

The registrar of the Pharmaceutical Society of Ireland writes:—"With reference to a resolution made at the Council meeting of the Pharmaceutical Society of Ireland on January 8, and published in THE CHEMIST AND DRUGGIST of January 19, as regards a circular issued by the Scottish Equitable Life Assurance Society to the licentiates, it has since been pointed out that through a misapprehension on the part of the movers of said resolution, there was error in stating that the circular referred to the approval of the Council as to the terms offered. The circular contained no such statement, and was quite in order."

Brevities

The influenza epidemic in Belfast and Northern Ireland has made trade exceptionally brisk. More medicine has been dispensed in the past few days than for many months, and dispensers have had to work late to meet the demand. In connection with the outbreak the Ulster Retail Drug Trade Association has issued a series of precautions, which have been advertised in the daily Press, on how to avoid an attack, and warning the public not to buy useless disinfectants from hawkers but to go to their chemists.

Three pharmaceutical chemists in Northern Ireland were elected at the urban council elections on January 16. In Coleraine, Mr. R. F. Macartney was fourth on the poll, and as sixteen candidates had to be returned Mr. Macartney's high place gave him the added distinction of becoming an alderman, Coleraine having just been created a borough. At Portadown Municipal Elections, Mr. A. L. Martin, Ph.C., headed the poll, in a keenly contested fight for South-West ward, for which nine candidates sought honours. Mr. John Sandford, Ph.C., was returned for North ward.

The ministry for Local Government is inviting tenders, on or before February 6, from persons desirous of becoming official contractors under the Free State Local Authorities Purchasing Scheme, for the supply of the following, for six months from April 1:—Medicines and drugs, medical and surgical requirements, malt extract and oil, paints, oils and colours, patent foods, petroleum, polishes, sheep dips, soaps and soap powders, varnishes, white and red leads, food and drug requirements, distempers, disinfectants, etc. Full particulars can be obtained from the Trade Department, Room 36, Custom House, Dublin.

Belfast

The "Belfast Gazette" of January 26 notifies that on January 19, 1929, an Order in Council was made by the Privy Council of Northern Ireland, under Section 8 (2) of the Dangerous Drugs Act, 1920, applying the provisions of Part III of the Act to benzoyl-morphine, dihydro-oxycodine, dihydrocodeinone, and their respective salts, and to any preparation, admixture and extract containing the said drugs.

At Belfast Police Court, on January 23, Mr. W. R. Stinson, chemist, North Street, was ordered to pay costs on a summons for having assistants working during a half-holiday. In reply to Mr. Graham, who defended, an inspector said the assistants told him they remained to dress the window without the knowledge of Mr. Stinson.—At the same court, Mr. J. Wilkinson, R.D., Duncairn Gardens, was fined 2s. 6d. for failing to display a notice that the shop was only open for the sale of exempted goods on the half-holiday.

Birmingham Analyst's Report

THE report of the Birmingham city analyst (Mr. J. F. Liverseege, F.I.C.) for the fourth quarter of 1928 states that under the Sale of Food and Drugs Acts 1,177 samples were submitted, 1,085 being bought informally, and of which 27 were adulterated. Ninety-two samples were bought under the provisions of the Acts and the vendors were notified that the samples were for analysis. Of these fourteen were adulterated. The percentage of adulteration, 3.5 per cent., is higher than in the previous five years, in which the figure has varied from 1.8 per cent. to 2.5 per cent.

With regard to drugs, twelve samples of oxymel of squill were of satisfactory composition, but one informal sample had been prepared with glucose syrup instead of honey. It was labelled, "Oxymel Scillæ," with the name of the vendors underneath, but no indication was given on the label that it was not B.P.

Four samples each of boric acid ointment and Rochelle salt were genuine, and also the single samples of the following drugs:—Tincture of ginger, compound tincture of lavender, tincture of squill, weak tincture of iodine, ammoniated tincture of quinine, sal volatile, tincture of hyoscyamus, syrup of tolu, syrup of lemon, pure glycerin, eucalyptus oil, methyl salicylate, zinc sulphate, chlorinated lime, menthol, powdered gum acacia, sodium salicylate, barium sulphate for x-ray diagnosis, quinine sulphate, camphorated oil, cod-liver-oil emulsion, potassium bromide and potassium citrate.

Seven samples each of potassium chlorate and phenacetin tablets were examined, and one of each of calcium lactate, aspirin and salol tablets. In each case the amount of drug present approximated to that stated, but there was considerable variation in the amount of talc used in making the tablets. Of the seventeen samples, nine contained 0.04 per cent., three 1.4-1.7 per cent., three 2.8-2.9 per cent., and two 5.7-5.9 per cent. One of the six informal samples of ground nutmeg was deficient in essential oil, and the vendor was cautioned.

Corner for Students

Conducted by Leonard Dobbin, Ph.D.

Communications should be addressed "Corner for Students, 'The Chemist and Druggist,' 42 Cannon Street, London, E.C.4."

QUALITATIVE ANALYSIS

A MIXTURE of not more than three salts will form the subject of the next exercise in qualitative analysis. The mixture may contain metallic and acidic radicals occurring in the British Pharmacopœia, or any of the commoner radicals not mentioned in that work, and is to be submitted to a thorough systematic examination. All its constituents are to be detected, and proof is to be given that the substances detected are the only constituents of the mixture.

Students' applications for portions of the mixture of salts (accompanied by a stamped and addressed envelope, not a stamp merely) will be received up to Tuesday, February 5, on which day the samples will be posted. Students' reports will be received up to Saturday, February 16. Each report should contain a concise account of the work done, and should include a list of the constituents detected. In this list any substance regarded as an accidental impurity should be distinguished from the essential constituents of the salts composing the mixture.

The analysis announced above forms the fourth exercise in the analytical tournament for the current winter session. The usual monthly first and second prizes in this series of analyses will be awarded only to apprentices or assistants who are preparing for the Qualifying examination of the Pharmaceutical Society of Great Britain or of Ireland, which fact must be attested on their reports.

INCREASED assessment of shop premises at Huddersfield has resulted in 700 appeals being lodged.

Retail Pharmacists' Union

Meetings of the Executives of the Retail Pharmacists' Union and Chemists' Defence Association were held at 4/5 Queen Square, London, W.C.1, on January 22, Mr. J. E. French in the chair.

PHOTOGRAPHIC DEALERS' ASSOCIATION

A report was received regarding the position of chemists in connection with the P.D.A., and it was decided to take no action.

GLYN-JONES MEMORIAL FUND

The secretary reported that up to date over £150 had been received in response to the circular appealing for funds for the Glyn-Jones Memorial.

N.H.I. ADVISORY COMMITTEE

A report was received stating that the N.H.I. Advisory Committee had been established and would consist of Drs. Greenfield, Lilley, Day and Heal, representing the British Medical Association; Messrs. French, Mallinson, Tickle and Rowsell, representing the Retail Pharmacists' Union; and Messrs. Allsop, Hodgson, Potts and Llewellyn Jones, representing the National Association of Insurance Committees, with a representative to be appointed by the Medical Research Council. Dr. Greenfield will be the chairman.

TERMINATION OF CHEMISTS' CONTRACT

The Ministry of Health have agreed to the request of the R.P.U. for an extension of the period within which the R.P.U. will be entitled to ask for a revision of the existing agreement. It will be possible, therefore, to revise the existing agreement at the end of the year 1929.

FEHLING'S SOLUTION

A proposal was considered from the Ministry of Health to include Fehling's solution in the drug tariff, and the secretary was instructed to inform the Ministry that the Executive strongly disapprove of the inclusion of Fehling's solution in the list of drugs.

EXPENSIVE APPLIANCES

The attention of the Ministry of Health having been drawn to the question of checking the accounts for special appliances obtained from ordinary appliance dealers and makers, the Ministry had replied stating that the Pricing Bureaux had a wide experience of such prescriptions and were in a position to prevent over-charging in these cases. The R.P.U. Executive were not satisfied with this reply, and the secretary was instructed to inform the Ministry that such prescriptions would in future be subjected to a special scrutiny through the Pharmaceutical Committees.

C.D.A. Matters

The secretary reported that there were seven cases outstanding, but of these two might be considered closed, and three had been settled as follows:—(1) Claim for injury to eyes due to wrong directions on label for eye lotion, settled by payment of £63 13s.; (2) claim for injury to eyes caused by wrong eye drops supplied, settled by payment of £20; (3) claim for damage to coat caused by door latch, settled by payment of 10s.

Thirteen new cases had arisen and settlements had been effected in the following six cases:—Claim for lost films, settled by payment of 10s. 6d.; illness caused through medicine supplied too strong, settled by payment of £2 2s.; carbolic acid supplied instead of carbolic oil, settled by payment of £3; injury to head caused by aq. regia supplied instead of spirit soap, settled by payment of £3 14s. 6d. Two claims for damages caused by cycling errand boys had been settled by payments of £7 14s. and £7 0s. 10d. respectively.

The secretary reported that a member had been defended in respect of a summons under the Sale of Food and Drugs Acts for selling ammoniated quinine tablets not of correct strength. There was no legal warranty, and the member had been fined £2 2s. and £2 18s. 4d., although the suppliers of the tablets accepted full responsibility in Court.

East Anglia.—The quarterly meeting of the East Anglian Federation of Pharmacists and Group Executive was held on January 17 at Norwich, the president (Mr. S. G. Tydeman) in the chair. The chief speaker was Mr. H. Gilleghan, vice-chairman of the R.P.U., and he gave a detailed explanation of the working of the new Chemists' Sickness and Provident Society. He said they would accept any pharmacist or anyone engaged in the retail, wholesale or manufacturing, and there was also a special department for women. He made a special appeal to the younger ones to join, and to everyone to spread word of the Society. Mr. Gilleghan answered questions, and went on to deal with other activities of the R.P.U. A vote of thanks was accorded him for his address. Mr. A. Denny (Deshell Laboratories) gave a talk on *Pharmacy in America*. Mr. S. T. Milbank briefly touched on the new D.D.A. regulations. A collection on behalf of the Widows' and Orphans' Fund realised £2 2s.

Warwickshire.—The Warwickshire Branch of the Union met at Leamington on January 24, Mr. Hutton in the chair. The secretary reported that he had received assurance that in each of the cases of price-cutting ordered to be dealt with at the last meeting there would be no further trouble. Correspondence relating to the Sir William Glyn-Jones Memorial Fund was read. It was resolved to forward a letter of thanks to headquarters for their activities in propaganda on behalf of the members, and to assure them of the continued support of the Branch in dealing with certain forms of obnoxious advertising and unfair distribution of proprietaries. In view of the small attendances at meetings of the Branch, it was not considered advisable to adopt the suggestion of local meetings in connection with the Chemists' Sickness and Provident Society. It was resolved to ask the R.P.U. to approach doctors and to impress on them the necessity of properly filling in D.D.A. prescriptions. In view of the increasing menace to pharmacists from co-operative societies, it was unanimously decided to approach headquarters with a view to some remedy.

Drug-Fund Shortage

PANEL doctoring has become the subject of discussion in "The Saturday Review," and a recent issue of that paper contains two letters which point the moral that chemists are very ill-advised to associate themselves with anything that tends to increase the feelings of annoyance and exasperation which trouble panel practitioners at the present time. The now notorious letter sent to panel chemists by the London Pharmaceutical Committee comes in for a further share of attention in one of the letters, the writer of which remarks that the restrictions and limitations imposed on panel doctors are quite as often hostile to, as protective of, the public interest. In the other letter, it is clearly shown, by implication, how troubles associated with development of the panel system are primarily due to the insufficient allowance of money from the outset. Thus, it is pointed out that the National Insurance Act came into operation in January 1913, after which there followed a period of about a year and a-half, during which its provisions were only tentatively utilised. Next came the social upheaval of the war, with a large part of the potential beneficiaries away on active service. Money was plentiful during this period and the "boom" years which immediately followed, and people "paid for their medicine" in preference to patronising the panel doctor. But then came the slump in trade and the widespread unemployment which still exists. Apart from the direct effect of this, with its concomitant physical privation upon the national health, it is suggested that the indirect and psychological effect of anxiety and depression would, one would suppose, be sufficiently obvious to the least reflective. In addition, however, the panel system is becoming increasingly popular, so that more and more are now availing themselves of its provisions.

CHEMISTS' ACTION APPRECIATED.—Brierley Hill Urban Council have expressed their appreciation of the action of the local chemists in agreeing to open alternately on Sunday evenings.

Pharmaceutical Society of Great Britain

Qualifying Examination Results

The following are the results of the Pharmaceutical Society's Qualifying examination held in Edinburgh last month:—

	No.	PRELIMINARY SCIENTIFIC				CHEMIST AND DRUGGIST QUALIFYING			
		Absent	Failed	Referred	Passed	Absent	Failed	Referred	Passed
Entered for whole examination ...	1	—	—	—	1	—	1	—	—
Entered for C. and D., and referred subject in Prelim. Sc. ...	4	—	—	1	3	—	3	—	—
Entered for Prelim. Sc. only	80	3	17	32	28	—	—	—	—
Referred subject in Prelim. Sc. only ...	38	—	—	5	33	—	—	—	—
Entered for Chemist and Druggist only	73	—	—	—	—	6	30	17	20
Referred subject in Chemist and Druggist	53	—	—	—	—	2	—	14	37
	249	3	17	38	65	8	34	31	57

Referred in one subject:—Botany, 11; chemistry, 27; pharmacognosy, 3; pharmacy, 20; pharmaceutical chemistry, 8; total, 69.

CHEMIST AND DRUGGIST QUALIFYING EXAMINATION

The following, having satisfied the examiners, have been registered as chemists and druggists:—

Adam, J., Edinburgh	Leitch, D., Tranent
Cameron, D., Kirkintilloch	McCraw, D. H., Portobello
Cameron, R. L., Edinburgh	McGrail, D., Helensburgh
Chapman, D. B., Dundee	McNaughton, Agnes M., Leslie
Cockburn, W. N., Newtonmore	Marriner, R., Leeds
Coleman, C., Glasgow	Mothersdale, J. V., Eaglescliffe
Deacon, T. W., Gainford	Munachen, G. R., Dalrymple
Dempster, Isabella M., Perth	Murdoch, Margaret R., Gourcock
De Vall, S., Scarborough	Owen, Eirwyn, Bangor
Dickson, H. R., Broughty Ferry	Pape, H. D., Keswick
Gariff, C., Edinburgh	Pearlson, P., Leeds
Gibson, T. F., Dundee	Penman, A., Falkirk
Girvan, Sarah A. G. R., Glasgow	Pert, J. C., Montrose
Goldberg, W., Glasgow	Pringle, E. N., Furst Hall, Northumberland
Goudie, R. E., Leith	Rathbone, S., Blackpool
Griffin, W. Ed. E., Durban, Natal	Richards, J. P., Glasgow
Griffiths, G. J., Birkenhead	Robson, N. C., Newcastle-on-Tyne
Hainstock, J. A., Harrogate	Rollo, Marion C., Twechar
Hall, L. G., Barrow-in-Furness	Southall - Edwards, S., Stockton-on-Tees
Henderson, Sarah M. K., Glasgow	Stewart, A. R., Perth
Hosie, J., St. Boswells	Stewart, J. A., Saltcoats
Hunter, C. J., Darlington	Stuart, C. L., Glasgow
Hutchison, J. C., Uddingston	Tait, W., Falkirk
Jennings, L. W., Castleford	Taylor, Eileen W., Birkenhead
Johnson, J. H., Dunfermline	Thomson, A. S., Woodford Green
Jones, W., Falkirk	Walliss, A., York
Kilgour, G., Sunderland	Whigham, Eliz. S., Kirkintilloch
Knight, Mary G., Leeds	Wilson, J. A., Musselburgh
	Wright, J. P., Dunfermline

The Forthcoming Conversazione

As announced in the "Coming Events" section of this issue, a conversazione (the first for many years) will be held at 17 Bloomsbury Square, London, W.C.1, on the evening of February 12. The whole of the Society's buildings will be thrown open, and in every department exhibits of interest will be shown. In the Library there will be an exhibition of old manuscript recipe books and herbals. There will also be a collection of the pharmacopœias of the London College of Physicians. On the left hand of the entrance hall will be exhibits illustrating the common adulterants of drugs. On the right hand will be exhibits illustrating curious drugs of the seventeenth century. Here there will also be an exhibit illustrating drugs recently introduced. The Council Chamber has a valuable collection of portraits of past-presidents. In addition there will be the first minute book of the British Pharmaceutical Conference Executive Committee, the Charter and Supplementary Charter, and other documents.

In the Pharmacological Department there will be demonstrations and charts. In the Chemistry Department of the Society's School there will be exhibits of new methods of analytical procedure, exhibits illustrating the syntheses of drugs, arsenic determination, methods of determining physical constants, and many other features. In the Chemical Research Laboratory will be shown apparatus and methods used in research work. In the Research Laboratory (Pharmacognostical Department) apparatus will be exhibited for use in drawing microscopical preparations, the camera lucida, apparatus in use by research students. In the Histological Laboratory micro-polariscopes will be exhibited. The Pharmaceutical Department will have an exhibit illustrating the uses of the epidiascope and of the mercury vapour lamp for the identification of impurities in drugs, experiments illustrating the theory of emulsions, the preparation of colloidal silver by the electric arc and other modern processes. Members of the Society who propose to be present are asked to inform the secretary of the fact and to give the numbers of friends whom they will bring with them.

Branch Meetings

Lancashire (N.E.).—Mr. Arthur Dobson presided over a meeting of the North-East Lancashire Branch at Blackburn, on January 22, when Mr. H. Brindle, B.Sc., A.I.C., Manchester, gave an address on *Charcoal—its Uses in Pharmacy and as a Protection against Poison Gas*. Mr. Brindle dealt with the history of charcoal, and explained its medicinal uses and the way in which it acted. Its chief use was as an adsorbent. The usefulness of other adsorbents was also referred to. Questions were asked regarding the methods of manufacturing charcoal in the present day, and of the tests applied to medicinal charcoal. Mr. Brindle was thanked on the proposition of Mr. S. H. Sidebottom (Accrington).

Ipswich.—Interest was shown by local pharmacists in a lantern lecture on *Vitamins*, given on January 21, by Mr. Frank Wokes, of the Pharmaceutical Society's Pharmacological Laboratories. Mr. J. C. Wiggan, chairman of the Ipswich Branch, presided. The lecturer showed photographic diagrams to illustrate the progress which had been made in the study of vitamins, and gave a detailed account of the principles involved in determining dosage and their application in assay. Progress had rendered it possible to add vitamin D to foodstuffs. Questions were answered by Mr. Wokes. A vote of thanks was proposed by Mr. Smith of the Ipswich Scientific Society.

Manchester.—A meeting of the Manchester, Salford and District Branch of the Pharmaceutical Society, in conjunction with the Manchester Pharmacy Students' Association, was held at the University on January 16, when Professor T. H. Pear, Professor of Psychology at Manchester University, gave a lecture on *Psychology in its Relation to Medical Treatment*. Mr. James Grier, M.Sc. (chairman), invited questions after the lecture. A vote of thanks was proposed by Mr. Harry Brindle and seconded by Mr. A. E. Thorpe. Professor Pear replied.

Legal Reports

Calomel Ointment.—At Bow Street Police Court, London, on January 21, Boutalls, Ltd., chemists, Southampton Row, W.C.1, were summoned, at the instance of the Holborn Borough Council, for selling, to the prejudice of the purchaser, at their shop in Bury Street, Bloomsbury, calomel ointment which was deficient in mercurous chloride to the extent of at least 51 per cent. Mr. Hawkes prosecuted on behalf of the Council, and Mr. C. H. Kirby, solicitor, represented the defendants. Evidence of purchase was given, and it was added that the Borough Council's analyst, Mr. J. Kear Colwell, reported the sample as containing 9.6 per cent. of mercurous chloride and 90.2 per cent. of benzoated lard. Mr. Hawkes said that, as the case was contested, it would be necessary to have an independent analysis made at Somerset House. It was agreed that the hearing should be postponed for a month.

Warranty Defence Fails.—At Huddersfield Police Court, on January 25, Mr. Norman Lander, chemist and druggist, Wakefield Road, Moldgreen, was summoned for an alleged breach of the Sale of Food and Drugs Acts. A lengthy discussion took place as to whether a warranty would protect a chemist who had sold purified borax which contained 70 parts of arsenious oxide per million. Mr. E. D. Spencer, prosecuting, said that the limit of arsenious oxide in purified borax as laid down by the B.P. was 5 parts per million. Dr. Moore, medical officer of health, cross-examined for the defence, admitted that a person would have to consume 32½ oz. of the purchased borax before he could take as much as one recognised dose of arsenic, but arsenic tended to accumulate in the system. It was explained for the defence that the warranty on the wholesalers' invoice stated that the borax was of B.P. quality. The borax was ordered through a traveller. Mr. Spencer said the warranty on the invoice did not protect the chemist unless the warranty was specially asked for when the traveller was booking the order. Mr. Smith, for Mr. Lander, said it was understood between the two parties that the warranty would follow when the order had been booked. A fine of 40s., with costs, was imposed.

Sentence of Imprisonment Quashed.—In the Court of Criminal Appeal, on January 23, before the Lord Chief Justice and Justices Acton and Macnaghten, Mr. William Londresborough Towers, chemist and druggist, Chatham, appealed against a sentence of one month's imprisonment passed on him at the West Kent Sessions for giving treatment for a venereal disease (*C. & D.*, January 12, p. 34). Mr. Garcia, who appeared for Mr. Towers, argued that the conviction could not be upheld, but that contention the Lord Chief Justice negatived. His lordship added that they had received a communication from the chairman of the West Kent Sessions, in which he said that they would have preferred in that case to have inflicted a fine on Mr. Towers instead of imprisonment, but were under the impression at the trial that they had no alternative but to send the appellant to prison. Since then, however, they had ascertained that they could have imposed a fine. His lordship added that the charge against Mr. Towers was that he gave treatment to a man who was suffering from a grave venereal disease, and it was stated in evidence that proper treatment for the disease had been delayed by several weeks. It was said that Mr. Towers wrongly diagnosed the complaint from which the man was suffering. The Court would take into consideration the communication from the chairman of the Sessions and would quash the sentence of imprisonment passed on appellant, and instead would impose a fine of £50. The appellant would also have to pay the costs of the prosecution. Mr. Towers, who was in court, immediately paid the fine.

Legal "Knowledge" of a Customer.—At Larne, co. Antrim, Petty Sessions, on January 23, the case in which Mr. Robert Tweed, jun., R.D., Main Street, was charged with selling methylated spirits to a man unknown to him (*C. & D.*, January 5, p. 6) came up again. (At the first hearing the two magistrates disagreed and the case fell through.) It was now heard by Major McCallum and Mr. Moriarty, two other stipendiary magistrates. Mr. McNinch, solicitor for the defence,

said that the question was whether a man could be said to be "known" to another person when his name and address were not accurately known. In this case the man was well known by sight to Mr. Tweed, who was not sure of his name, and when the man gave the name of John Brown it was accepted by Mr. Tweed, who entered that name and the correct address in his register of sales. Police-Inspector Martin said his contention was that knowing a man by sight was not a compliance with the law when the entry of the correct name and address was the completion of the sale. Mr. McNinch based his defence on the dictionary definition of the word "unknown," which was "not known, not mentally apprehended." In this case it could not be said that the man was not known to Mr. Tweed. He was perfectly well known, and it was only his name that was not known. Mr. Martin submitted that for the purposes of the Act that man was unknown, and should have been introduced by someone whom the vendor did know. Major McCallum said that in a similar case he had held the same view a short time ago, and he could not go back from that. Mr. Moriarty agreed that only knowing a purchaser by sight was not sufficient; but, as the vendor seemed to be under a misapprehension, they had decided in the mitigating circumstances to dismiss the case if the defendant paid the costs, 9s.

New Companies and Company News

P.C. means Private Company and R.O. Registered Office.

CHAS. LOWE & Co. (MANCHESTER), LTD. (P.C.)—Capital £40,000 in £1 shares. Objects: To acquire the business of a manufacturing chemist now carried on by C. W. Lowe as "Chas. Lowe & Co." at Reddish and 43 Piccadilly, Manchester. Other particulars are the same as those in F. C. Calvert & Co., Ltd.

F. C. CALVERT & Co., LTD. (P.C.)—Capital £100,000 in £1 shares. Objects: To acquire the business of a manufacturing chemist now carried on by C. W. Lowe as "F. C. Calvert & Co." at Gibbon Street, Bradford, and at 43 Piccadilly, Manchester. The subscribers are: C. F. P. Lowe, manufacturing chemist, and P. J. Kett, solicitor's clerk. The first directors are C. W. Lowe (permanent governing director), and others to be appointed by him. Qualification 100 shares. Solicitors: Grundy, Kershaw, Samson & Co., 6 Austin Friars, E.C.2. R.O.: 43 Piccadilly, Manchester.

MORGAN, VERNEY & Co., LTD. (P.C.)—Capital £300. Objects: To carry on the business of manufacturers and importers of and dealers in chemicals and chemical products, and particularly all forms of paint, varnish, cellulose, etc. The subscribers are W. S. Cane and G. C. Vaughan-Morgan. R.O.: 87 Buckingham Palace Road, S.W.1.

BRITISH CHEMICALS AND PHOTOGRAPHIC SUPPLIES, LTD. (P.C.)—Capital £100. Objects: To carry on the business of manufacturing chemists, analysts and research chemists, manufacturers, agents, importers and exporters of and dealers in chemical and photographic goods, etc. The subscribers are: R. H. Spinneys and C. M. Bear. Solicitors: Ramskills, 7 Bow Street, W.C.2.

J. B. HAY & Co., LTD. (P.C.)—Capital £5,000. Objects: To carry on the business of wholesale druggists and sundriesmen formerly carried on by W. C. Hardwick and E. T. John, at 47 Rupert Street, W. The directors are: W. C. Hardwick and J. J. Hanson. Solicitors: Mills, Curry & Gaskell, Balfour House, Finsbury Pavement, E.C.2. R.O.: 47 Rupert Street, W.1.

NORTH BRITISH CHEMICAL Co. (1929), LTD. (P.C.)—Capital £10,000. Objects: To acquire the business of the North British Chemical Co. (England), Ltd., to adopt an agreement with said old company and its liquidator, and to carry on the business of manufacturers of dyestuffs, for the textile, leather and paper trades, foodstuff colours, lakes, pigments, paints, stains, varnishes, lacquers and enamels, etc. The subscribers are: L. Blundell, C. Thompson and Mrs. C. S. Blundell. Solicitor: M. Blumberg, 31 Princess Street, Manchester.

SODAX (1929), LTD. was registered as a "public" company on January 15, with a nominal capital of £150,000. Objects: To adopt an agreement with Sodax, Ltd., and H. T. Jenner, to develop, work and grant licences in respect of inventions for improvements in or relating to apparatus for charging liquids with carbon dioxide, and to carry on the business of manufacturers of and dealers in soda-water machines, plant, machinery, vessels, syphons, filters, bottles, apparatus, etc. The first directors are: Sir Wilfred H. Sugden, M.P., W. L. Philip, M.I.M.E., O.B.E., J.P., T. V. McNidder, H. W. White and J. Southern. R.O. is at 31 Lombard Street, E.C.3.

A MILLAR & Co., LTD.—After making due provision for salaries, wages, repairs, bad debts, directors' fees, etc., the net profit for year ended October 31, 1928, including £6,978 brought forward, amounts to £13,313. An interim dividend at the rate of 5 per cent. per annum on the Preference shares was paid last June, amounting (less tax) to £1,275, leaving a balance of £12,038. A final dividend on the Preference shares at the rate of 5 per cent. (less tax)—£1,275—was paid in December last. There remains a sum of £10,763, out of which the directors recommend the payment of a dividend on the Ordinary shares of 3 per cent. per annum (less tax), £3,825, and to be carried forward to next account £6,938. The report was adopted at the annual meeting held in Dublin on January 17.

VINHO VICOR (TONIC PORT), LTD.—At a meeting held in London on December 31, it was resolved that this company be wound up voluntarily. Mr. C. E. Barker, 91 Moorgate, London, E.C.2, was appointed liquidator.

DAVID THOM & Co., LTD., Manchester, soap makers, etc. The profit was £12,614, against £8,413. To reserve £5,000, dividend on ordinary 17 per cent. (against 13 per cent.); forward £6,446 (against £5,106 brought in).

COMPANIES WHICH MAY BE DISSOLVED.—The under-mentioned companies will, unless cause is shown to the contrary, be struck off the register and the companies dissolved three months after January 18:—City Optical Co., Ltd.; Direct Medico Supply Co., Ltd.; Valdor Soap Manufacturing Co. (Nottingham), Ltd.; Vapozol, Ltd.

Private Arrangements

Arthur Leonard Still, The Pharmacy, West Lavington. —A meeting of the creditors was held on January 2, at the offices of Francis Nicholls, White & Co., Old Jewry Chambers, London, E.C. Mr. R. S. Cusden Devizes, reported that the debtor had executed a deed of assignment in his favour. The liabilities were £503 8s. 2d. After allowing £31 0s. 5d. for preferential claims, the assets were estimated to realise £357 18s. The assets consisted of stock £177 7s. 11d., fixtures £146 10s. 6d., and book debts valued at £65. The household furniture was the property of the debtor's wife. Steps had been taken to continue the business with a view to a sale as a going concern. The bank were creditors for £99, but they held life policies as security. The debtor purchased the business in 1926 for £500. The lease expired in September 1930, but it was thought that a renewal could be obtained. A resolution was unanimously passed confirming the deed, and Francis Nicholls, White & Co. were appointed to act as a committee. The following are among the creditors:—Thos. Hodgkinson, Prestons & King, £37; Francis Newbery & Sons, Ltd., £65; Wright, Layman & Umney, Ltd., £24.

Business Changes

MISS MARY TEUNTON, chemist and druggist, has opened a business at Victoria Road, Kirkcaldy.

PENNEY & Co., LTD., distributing agents, have moved to larger premises at 179-185 Great Portland Street, London, W.1. Telephone: Welbeck 3715.

KIMPTON BROTHERS, drug merchants, 36-37 Mincing Lane, London, E.C.3, where they have been established since 1882, have moved to larger offices at 30 Mincing Lane.

Wills

MR. T. L. MORGAN, of Medical Hall, Llandoverly, Carmarthen, chemist, left estate of the gross value of £1,259.

MR. F. C. COATES, formerly of Sherwood, Nottingham, chemist and druggist, who died on September 20, left £9,501, with net personality £9,453.

MR. J. W. R. BRACEWELL, Crosshills, Kildwick, Yorks, chemist and druggist, who died on November 26 last, aged 49 years, left estate of the gross value of £3,675, with net personality £1,933.

MR. H. B. FAULKNER, of Cobham, Surrey, of Faulkner's Drug Stores, Ltd., who died on September 6 last, aged 42 years, intestate, left estate of the gross value of £1,631, with net personality £1,586.

MR. ROBERT OWEN, 8 Bath Street, Chester, retired chemist, who died on November 9, 1928, left £8,719 13s. 9d., with net personality £8,622 13s. 9d. He gives £500 and the use of his residence and during widowhood £155 a year to his wife; and the residue of the property in trust for his son and grandchildren.

MR. JOHN RAE, of 19 Old Court House Street, Calcutta, India, chemist, of Bathgate & Co., of Calcutta, who died in London on May 13 last, aged forty-seven years, formerly of Lockerbie, N.B., and of Edinburgh, left, exclusive of estate in India, personal estate in England of the gross value of £1,010, with net personality £939 2s. 5d. Probate of his will, dated December 8, 1925, has been granted to Samuel Potter Coombes, bank manager, of Lloyds Bank, Ltd., as attorney for the executor, now resident abroad. He left all of his property equally between his brothers, David Adams Rae and Joseph Alexander Rae.

Trade-Mark Applications

The figures in parentheses refer to the classes in which the marks are grouped. A list of classes and particulars as to registration are given in "The Chemist and Druggist Diary," 1929, p. 333.

(From "The Trade-marks Journal," January 16, 1929.)

"**SWANFLEECE**" under oval cameo device of girl's head; for sanitary towels (11). By Veldown Co. Inc., 100 East 42nd Street, New York, U.S.A. 494,466.

"**AVA**" for perfumed soap (48). By P. Villain, 115 Croxted Road, Dulwich, S.E. 21. 489,803.

"**GIVEMME**" in script and block letters on oblong shape; for all goods (48). By Società Anonima Giuseppe Visconti di Modrone & Cie, 11a Vicoletto S. Damiano, Milan, Italy. 495,652. (Associated.)

(From "The Trade-marks Journal," January 23, 1929.)

"**EROS**" for photographic chemicals (1). By J. G. Russell, Clydesdale Works, Netherton, Wishaw, Scotland. 495,438.

"**CLIROD**" for all goods (1). By Ida Brook, 27 Fairfax Road, Bedford Park, London, W.4. 496,834.

"**PADLOCK SOAP**" on device including padlock; for disinfectant soap (2) and for soap (47). By G. W. Goodwin & Son, Ordsall Lane Soap Works, Manchester. 497,096/097. (Associated.)

"**ASDA**" for all goods (2). By R. M. Bennett, 72 Old Hall Street, Liverpool. 497,023.

"**GERMORT**" for insecticides (26). By J. Gadd (Colour and Chemical Agencies), Ltd., 126 Bishopsgate, London, E.C.2. 498,157.

"**TERPOFLOR**" for chemicals (2). By A. Landrin, 135 Boulevard Haussman, Paris. 497,685. (Associated.)

"**WOODBURY'S COLD CREAM**" on square device including medallion of man's head and name and address of applicants; for cold cream (3). By The A. Jergens Co., Ltd., 1 Herriott Street, Perth, Canada. B476,050.

"**LYSAGELS**" for medicinal chemicals (3). By Solidol Chemical, Ltd., 16 St. Helen's Place, London, E.C.3. 494,206.

"**JELOLVE**" for a medicated preparation (3). By Research Products, Ltd., 12-13 Henrietta Street, Strand, W.C.2. 495,011. (Associated.)

"**BIOLENE**" for medicinal chemicals (3). By A. R. Beard, 114 Walton Street, London, S.W.3. 495,877.

Festivities

Cheltenham Children's Party

THE Cheltenham ladies are continuing their good work in aid of the Benevolent Fund with more enthusiasm than ever. On January 19 they organised a fancy dress children's party at the Rotunda, and the event proved to be an outstanding success. A similar party was held last year, but the sale of tickets this year increased to such an extent that a larger hall will have to be taken in future. The programme was a mixture of dancing and games, interspersed with exhibition dancing and a visit from Father Christmas, who brought two sacks full of presents on his sleigh. This, with balloons, crackers, etc., provided a great deal of fun, and everyone felt tired but happy when "Auld Lang Syne" ended the evening.

Scottish Burns' Night

THE annual Burns' dinner of the Edinburgh and District Chemists' Trade Association was held in Ferguson & Forrester's Restaurant, Princes Street, Edinburgh, on January 23. Mr. George Hall presided, and Messrs. Currie, Chalmers and Hedderwick acted as croupiers. Playing in the haggis in procession was led by Piper Alfred G. Hall, Edinburgh University O.T.C. Mr. James B. Mitchell, ex-president, recited "Burns' Address to the Haggis." The "Immortal Memory" was proposed by the Rev. A. Duncanson in an eloquent speech. Mr. J. Rutherford Hill, making an appeal for the Benevolent Fund, quoted from a letter from Councillor E. H. Simmons, pointing out that the calls upon the fund were greater than ever. Scottish songs were contributed by Miss Nora Simpson, Dr. Tait and Messrs. Austin, Bell and Logan, Mr. Andrew L. D. Hall acting as accompanist. On the motion of Dr. George Coull a vote of thanks was awarded to the artists, and Mr. A. Currie called for a vote of thanks to the chairman. In replying, Mr. Hall attributed the success of the dinner to the energy and enthusiasm of Mr. J. Adamson, the secretary.

A Western Dance

MANY London leaders of pharmacy assembled at the Portman Rooms, Baker Street, W.1, on January 24. The occasion was the annual dance of the Western Pharmacists' Association, and the president (Mr. W. B. Falding) and Miss Falding were supported by the president of the Pharmaceutical Society (Mr. Herbert Skinner), Mrs. Freke, Mr. and Mrs. A. R. Melhuish, Miss Dennis Hayes (president of the Women Pharmacists' Association), Miss R. Sproule, Mr. and Mrs. C. A. Noble, Mr. and Mrs. Frank Noble, Miss Dora Noble, Mr. and Mrs. G. C. Bonner, Mr. and Mrs. William Chalmers, Mr. and Mrs. B. R. Wilkinson, Mr. Harry Martin, and others. The proceedings were joyous throughout; the credit for the success of the evening was largely due to the skilful direction of the M.C. (Mr. B. R. Wilkinson) and to the spade work of Mr. G. Thomas. The irrepressible Mr. Victor Hanna, of Dublin, was to the fore in the course of the evening with a wire wishing members of the Association a happy evening, and reminding them that the B.P.C. meeting in Dublin was to be the event of the year.

Wallasey Association Dinner

THE annual dinner of the Wallasey Pharmacists' Association was held recently at the Hotel Victoria, New Brighton. The chair was occupied by Mr. H. Siddall (president), who was supported by Messrs. A. Colbeck (vice-president), H. C. Tristram (secretary), F. C. Cooling (president of the Birkenhead and Wirral Association), E. H. Simmons (member of the Council of the Pharmaceutical Society), F. W. Dyke (Evans Sons Lescher & Webb, Ltd.), and Harold Bent (clerk of the Wallasey Insurance Committee). Mr. Oliver Marsh (Wallasey) proposed the toast of "The Pharmaceutical Society and the Benevolent Fund." The fact that they were going through hard times should evoke their sympathy to a greater extent than in times of prosperity. Mr. Simmons, who replied, said that no doubt some very important results would spring from the Departmental Report, and the Society was already formulating plans to meet any contingency that might arise. In speaking

of the Benevolent Fund, he felt that the educational policy of the Council had a distinct bearing on the subject of benevolence. At present there were about fifty annuitants, but the hands of the Council were tied, and they did not want to touch the principal. What was wanted were more annual subscriptions. Last year Wallasey increased its contribution from 5s. 6d. to 6s. 3d. per head. The toast of "The Ladies" was proposed by Mr. Harold Bent, and responded to by Mrs. Siddall.

Norwich Dinner

AT the annual dinner of the Norwich and District Branch of the Pharmaceutical Society, on January 17, a protest was made against the extension of the Dangerous Drugs Act. The dinner followed a meeting held earlier in the day. The chair was taken by Mr. J. de Carle Smith (chairman of the Norwich Branch), and the visitors included the Deputy Lord Mayor of Norwich (Mr. H. E. Witard), and Mr. Denny (Chicago). Mr. P. Robinson, proposing "The East Anglian Federation and Retail Pharmacists' Union," congratulated the Norwich Branch of the Pharmaceutical Society upon their chairman and the share he took in the organised work of the profession. Mr. S. G. Tydeman (president of the East Anglian Federation of Pharmaceutical Associations), responding, said the Federation was active in every direction and very much alive. They always got a bigger collection in Norwich for their Benevolent Fund on behalf of widows and orphans than in any other place they met. (Applause.) He was glad to see so strong a spirit of pharmaceutical fraternity existing in that area. Mr. H. Gilleghan (Leeds) also replied to the toast. Mr. J. de Carle Smith confirmed what was said by Mr. Gilleghan about the ridiculous additions recently made to the Dangerous Drugs Act. There was a very grave doubt as to whether these Acts as they stood were for the good of the country. Mr. Wiggen (Ipswich) proposed the toast of "The Pharmaceutical Society and Local Branch." Mr. Millbank (Bishop's Stortford), replying, said the Society had gone ahead through examinations and produced a syllabus which would render chemists suitably qualified men. The toast of "The Visitors" was proposed by the chairman and acknowledged by Dr. H. J. Starling.

Guildford Association's Dinner

THE Guildford and District Pharmacists' Association held a dinner at the Lion Hotel on January 23, when the company numbered about ninety. The speeches were few and were interspersed with musical contributions. Mr. J. H. Mather (president of the Association) was in the chair, and was supported by Dr. A. M. Mitchell. Mr. H. N. Linstead (secretary of the Pharmaceutical Society of Great Britain), Mrs. Linstead, Mr. F. J. Smith (P.A.T.A.), Mr. W. Massey and Miss Blackburn. The president, in submitting "The Pharmaceutical Society," said that the revival and vigour of the local Association was due almost entirely to the efforts of Miss Blackburn. Dealing with the Benevolent Fund, he said he would feel very proud at the end of his year of office if the Guildford Association, by a united effort, was able to hand over a handsome sum to the fund. He paid a tribute to Mr. Linstead. Mr. Linstead, in response, said that there was a need for a central place to which people could come up from the country and have a chat in something approaching a club. At the coming general election they knew of at least five pharmacists who had been definitely adopted as prospective candidates for five different constituencies. That was to the credit of the Society and the Parliamentary Committee. In regard to drug stores, he would like members to realise that they had now got six full-time inspectors, as well as about fifty part-time agents, who spent their time visiting shops, qualified and unqualified. During the last year they had instituted forty more prosecutions than in previous years, and they had visited 7,200 shops. Another encouraging sign was the activities of the branches. He expressed the Society's gratitude to the president, to Mr. Massey and Miss Blackburn for all they had done to bring about the revival and that dinner. Mr. Smith responded to the toast of "The Visitors."

Hastings Dinner

THE Hastings, St. Leonards and Bexhill Branch of the Pharmaceutical Society held their third annual dinner at the Queen's Hotel, Hastings, on January 23. Mr. Wimshurst (chairman) presided, others present including the deputy-mayor (Councillor Mrs. Badcock), Mr. F. G. Wells (member of the Society's Council), Mr. J. Plowright (chairman of the Brighton and Hove Branch), Mr. H. C. Browne (president of the Eastbourne Association), Mr. H. C. Edwards (president of the Hastings and St. Leonards Association), Mr. A. J. Franklin (president of the Brighton Association), Mr. K. J. Padwick (president of S.E. Counties Federation), Mr. Roberts (Worthing), Mr. Burgess (Brighton) and some local medical men. Mr. Wimshurst proposed the toast of "The Pharmaceutical Society." Mr. F. G. Wells, who replied, dealt with the question of the British Pharmacopoeia, and noted with satisfaction that of the seven persons on the present Commission, at least three were pharmacists, while one of the remaining four was intensely interested in pharmacy. Speaking of the D.D.A., he believed they were being saddled with the troubles of other countries, for he did not think that it had been proved that heroin had been wrongly used as a drug in this country. He quite agreed that it was time the Council put its foot down. Appealing for support for the Society's Benevolent Fund, Mr. Wells said last year was the sixtieth anniversary of the fund, and it had had big calls on it. The membership had grown enormously, but funds had not come in as they should have done. He congratulated the Branch on the increase in their subscriptions last year. The health of the deputy-Mayor was proposed by Mr. H. E. Skyrme. Responding, Councillor Mrs. Badcock said the Mayor, who attended the dinner last year, had assured her that she would be in good company. She had found that it was so. "Ladies and Visitors" were toasted on the proposition of Mr. H. M. Thompson. Mrs. F. W. Burgess replied. Mr. H. F. Baird proposed "Kindred Associations and the Federation of South-Eastern Counties Pharmacists." Mr. J. Plowright, in reply, said there could be no doubt of the benefits the various associations conferred upon their members. There were three duties he considered incumbent on every pharmacist; first, to be a member of the Society; second, to subscribe to the Benevolent Fund; and, third, to be a member of his local association. Mr. H. C. Browne said he thought they had all gained by the formation of the South-Eastern Federation, which he asked them to support by attending its meetings. Mr. H. C. Edwards proposed the toast of "The Wholesale Houses," and Mr. G. A. Speechly replied. The chairman thanked the dinner committee, and their secretary, Miss Lynch, for their work in arranging the function. Mr. Wells briefly proposed the toast of "The Hastings Branch, its chairman, and Mrs. Wimshurst." Congratulations were extended to Mr. H. E. Skyrme, whose son, Mr. Harold Skyrme, has won the Ransom scholarship.

Coming Events

This section is reserved for advance notices of meetings or other events. These should be received by Wednesday of the week before the meetings, etc., occur.

Wednesday, February 6

Ealing and District Pharmacists' Association, Restaurant Frascati, Oxford Street, London, W., at 6.30 for 7 p.m. Annual dinner and dance. Tickets 12s. 6d. each. Dancing from 9.30 till 11.45 p.m.

Friday, February 8

Sheffield Association of Junior Chemists, Physics Laboratory, Central Evening School, at 8.30 p.m. Debate on "Is Science a Curse to the Progress of Civilisation?"

THE PHARMACEUTICAL SOCIETY OF GREAT BRITAIN will hold a conversation in the Society's House, 17 Bloomsbury Square, London, W.C.1, on Tuesday, February 12, from 7.30 till 10 p.m. A reception will be held by the president (Mr. Herbert Skinner) from 7.30 till 8 p.m. The building will be thrown open for inspection. Refreshments; music.

THE WEST HAM AND DISTRICT ASSOCIATION OF PHARMACISTS will hold their annual dinner and dance in the Holborn Restaurant, London, W.C.1, on Thursday, February 14, at 6.30 p.m.

British Pharmaceutical Conference

WITH a view to securing the success of the forthcoming Dublin meeting of the Conference the local committees are enlisting the services of all who can help, and a series of entertainments been arranged for the coming months. The first of these, a dance in the Metropole Ballroom, Dublin, took place on January 22, and was very successful. A whist drive will be held on February 12, and a Cinderella dance has been arranged to take place in the Metropole Buildings on St. Patrick's eve, March 16. Between the whist drive and the entertainment on St. Patrick's eve it is hoped that the ladies' committee will be able to arrange some musical evenings. The dance in the Metropole was attended by over 250. Dancing took place from 9 p.m. to 2 a.m. The spot dances proved a particularly enjoyable feature of the entertainment. The prize winners were:—(1) Dr. Ashe and Miss Carroll; (2) Mr. Larkin and Miss Crilly; (3) Mr. and Mrs. William Murphy. There were also champagne and chocolate raffles, the winner of the former being Mrs. Walker, and of the latter Mrs. Morrow. Among those who attended were:—

Mr. M. Attwood and party, Dr. Ashe, Mr. and Mrs. Bourke, Mr. and Mrs. P. A. Brady and party, Mr. P. Cahil, Mr. Campion and party, Mr. Conlon and party, Mr. Costelloe and party, Mr. J. C. Dawson and party, Mr. and Mrs. G. Dowdall, Mr. and Mrs. E. J. Evans and party, Mr. F. J. Fitzpatrick, president of the Pharmaceutical Society of Ireland, and chairman of the Local Executive Committee, Mr. and Mrs. Gannon and party, Miss Griffin, Mr. V. Harris, Mr. and Mrs. V. E. Hanna, Mr. T. E. Hannan, Miss Bouchier Hayes and party, Mr. Hughes and party, Dr. Kavanagh and party, Mr. and Mrs. Keogh, Mr. Keyes, Miss Kerwan, Mr. P. D. Larkin and party, Mr. McAnally, Mr. J. V. McKeever, Mr. Magee and party, Mr. Misteer and party, Mr. Morrow and party, Mr. and Mrs. Wm. Murphy and party, Mr. Mushatt and party, Mr. and Mrs. D. J. Nugent and party, Mr. E. Nugent and party, Mr. and Mrs. O'Donnell and party, Mr. and Mrs. O'Farrell and party, Mr. and Mrs. Oliphant and party, Mr. O'Malley and party, Mr. C. O'Reilly, Mr. J. O'Reilly and party, Mr. F. Pearson, Mr. Phillips, Miss Pritchard and party, Miss Mills, Mr. W. Richardson, jun., Mr. and Mrs. J. J. Roche and party, Mr. W. H. Roche and party, Mr. J. Ryan and party, Dr. and Mrs. Ryan and party, Mr. Savage, Mr. and Mrs. John Smith, Dr. Isobel Smith and party, Miss Sutherland, Mr. Smullen and party, Mr. F. C. Thompson, Mr. M. J. Timoney and party, Mr. Tobin, Mr. and Mrs. Thornton, Mr. Ussher, Dr. J. A. Walsh and party, Mr. and Mrs. T. H. Walsh and party, Mr. Wilson and party.

During an interval, Mr. D. J. Nugent, chairman of the Entertainment Committee, read a number of telegrams addressed to Mr. Hanna, including the following:—

Mr. Reginald R. Bennett, chairman of the British Pharmaceutical Conference, wired:—"Greetings and heartiest good wishes to all attending dance."

Mr. Herbert Skinner, president of the Pharmaceutical Society of Great Britain, wired:—"Best seasonable wishes to all at dance. Tell them we greatly look forward to meeting them in June next."

Mr. W. J. Hardy, president of the Pharmaceutical Society of Northern Ireland, wired:—"Wishing first Conference function every success and all an enjoyable time."

Mr. F. A. Lawman, chairman of the Vinolia Co., Ltd., sent the following:—"Please convey president and committee best wishes for a most successful evening and happy augury for coming Conference. Regret absence."

The Editor of "THE CHEMIST & DRUGGIST" wired:—"Please accept my best wishes for a very successful function, the precursor, I trust, of a record Conference."

Before the last dance, Mr. F. J. Fitzpatrick, president of the Pharmaceutical Society, delivered a brief address, in which he referred to the success of the dance, and said the pleasurable time they had enjoyed was due to the untiring efforts of Mr. Victor E. Hanna, the local secretary. He asked the company to pass a vote of thanks to Mr. Hanna by acclamation. The president's request was enthusiastically complied with, and the vote of thanks to Mr. Hanna was passed with musical honours.

N. BHATTACHARYA & Co. is the name of a new concern which has lately been formed at 16 Bonfield Lane, Calcutta, with a capital of 50,000 rupees to carry on the business of chemists and druggists.

Fluosilicates in Agriculture

THE fluosilicates appear to be the best available substitutes for the arsenicals in the protection of plants against phytophagous insects, according to S. Marcovitch (Tennessee Experiment Station Bulletin 139). To study the tolerance of plants to arsenicals and fluorine compounds, potatoes were dusted with sodium arsenite and sodium fluosilicate—both soluble compounds. Plants that were dusted with sodium arsenite were killed, whereas the plants dusted with sodium fluosilicate received only slight to moderate injury. One of the principal factors causing foliage injury was found to be moisture. Humidity by itself does not seem to be important. The practice of applying fluosilicates in the early morning hours, when dew is present may, therefore, be the cause of injury to foliage. Hydrated lime was tried as a carrier for sodium fluosilicate, in order to ensure better distribution of the material. At the rate of 1 part, by volume, of commercial sodium fluosilicate to 9 parts of hydrated lime, no injury was noted. The dusts were applied in the morning after the dew had disappeared. Subsequent study has revealed the fact that in the presence of moisture, when lime is not used to excess, severe foliage injury may result.

According to chemical equations, the formation of the soluble calcium fluosilicate and sodium fluoride may explain the cause of the foliage injury when hydrated lime is not used to excess. Theoretically, 2 parts of hydrated lime should completely convert the sodium fluosilicate to calcium fluoride, but in poorly mixed dust it is probable that only enough lime may be pre-

sent to give the undesirable soluble products. It is possible, however, to avoid foliage injury on beans with sodium fluosilicate when used 1-9, by volume, and to make the application after the dew has disappeared.

Other carriers, such as talc, sulphur, calcium carbonate, barium carbonate, and flour, were also tried. In the presence of moisture, calcium carbonate and barium carbonate produced only slight injury on beans when used at the rate of 2 parts to 1 of sodium fluosilicate. The sulphur and talc mixtures produced very little or no injury, while flour seemed to be the best. A dust composed of sulphur—about 3 parts by weight or 6 parts by volume—should be satisfactory from the standpoint of preventing foliage injury on beans. The sulphur has also the advantage of being repellant to the bean beetle, and may aid in the control of the bean leaf hopper. The more readily soluble sodium fluoride, magnesium fluosilicate, and pure calcium fluosilicate, especially the last, are injurious to foliage. "Calcium fluosilicate compound," being insoluble, is quite safe on various types of foliage. Barium fluosilicate with a solubility of 1-3.750 also seems to be safe on foliage. When the latter was used as a spray with fish-oil soap, slight injury was seen. This may have been due to the formation of calcium fluosilicate. As a fertiliser or stimulant calcium fluoride is recorded as having a stimulating action on wheat, oats, carrots, potatoes, peas, beans, cabbage, poppy, and hemp. The results with wheat indicate a moderate stimulation from calcium fluosilicate and a four-fold increase from potassium fluoride.

New Fertilisers

THE rapid development of the synthetic processes of nitrogen fixation is bringing into the market new forms of fertilisers, not only of nitrogenous manures, but also of what are now named "concentrated" fertilisers, substances which contain the triad of plant foods, nitrogen, phosphorus and potash, either in direct combination with one another or containing a minimum of carriers, such as sulphur, chlorine and calcium. The main energies of the new industry have hitherto been centred in the production of ammonium sulphate, of which the use as a fertiliser has been familiar for nearly a century, the only distinction being that the new synthetic product is necessarily neutral, for sulphuric acid, as such, is not used; the acid radicle comes from anhydrite in a double decomposition in which ammonium carbonate and calcium sulphate take part. In the presence of catalyst it is easy to "burn" ammonia, and so it happens that nitrate of ammonia becomes the principal secondary product. Containing as it does 35 per cent. of nitrogen, this substance is a valuable fertiliser, but, being liable to detonation as well as deliquescent, it is not marketed as such. It is, however, tractable as an ingredient of a new fertiliser, Nitro-chalk, which is now being freely marketed. This is a mechanical mixture of calcium carbonate and ammonium nitrate, the former being a by-product of the manufacture of ammonium sulphate. As at present manufactured, Nitro-chalk contains 15.5 per cent. of nitrogen. As one-half of the nitrogen is in the nitric and the moiety in the ammoniacal form, this substance makes an extremely valuable artificial manure, particularly for "top-dressing." The nitric nitrogen is quick-acting, but the ammoniacal nitrogen is fixed by the soil colloids and becomes available slowly after nitrification by soil bacteria. Then, the calcium carbonate present guarantees a neutral reaction, so that there is no danger of acidification, such as may follow the use of sulphate of ammonia. In verifying the analysis of this fertiliser separate determinations of the three constituents should be stated.

The Continental manufacturers who are specialising in processes for the fixation of nitrogen are now marketing

other new fertilisers. For example, urea is proving to be useful for grassland, hops, and market garden purposes. The nitrogen content of urea is 46 per cent. and is in amide form, which is, of course, the form in which nature presents combined nitrogen to the soil. It is made simply by subjecting a mixture of carbon dioxide and ammonia to very high pressure. Then, it is now possible to make various phosphates of ammonia, of which Diammonphos is typical. Another notable new fertiliser is Nitrophoska. This supplies the N.P.K. triad, and five forms containing these three elements in various proportions are being marketed. The ingredients are believed to be ammonium phosphates, with potassium chloride or nitrate. It is not expected that these new concentrates will give results very different from standard mixtures of the artificial manures that have long been familiar to all, but it should be noted that they will eventually displace the older because they have at least two pronounced advantages; first, being concentrated, there is a great saving in cost of transport, and, secondly, their composition is invariable and easily verifiable. These new fertilisers, often containing more than one of the three essential plant foods, are giving rise to a new problem in agricultural chemistry. That is the question of the influence of one element on another. It has been the custom in the past to regard each as having a distinct and recognisable effect of its own. But there are now many reasons for believing that the relative balance of ingredients may be as important as their absolute amounts. A salt of potassium in relation to nitrogen may act as a catalyst in the sense that the true nitrogen effect on the plant may not be declared until the potassium balance in the soil reaches a certain figure. The value of a fertiliser does not, therefore, depend merely on the individual amounts of nitrogen, phosphates, and potassium found on analysis; the proportions of each may be significant. In the case of potato manures, the influence of this factor is undoubted; the nitrogenous content must be balanced by adequate potassium in the proportion of (say) equal weights of sulphate of ammonia and sulphate of potassium.

Weed Killers for Garden Paths

MATTERS pertaining to the sale and use of poisons in agriculture and horticulture are a subject of perennial interest, to country chemists in particular, arsenic being a special favourite. The subject blazed up as the result of a meeting of candidates for election to the Pharmaceutical Society in 1927, while "Arsenic: with special reference to its use in Horticulture and Agriculture" formed the title of a paper read at an Evening Meeting in Edinburgh twelve months earlier (*C. & D.*, 1926, I, 161). Among those who took part in the discussion on that occasion was Mr. P. F. Kendall, B.Sc., of the East of Scotland College of Agriculture, who agreed with the author (Mr. McCutcheon) "that arsenic had been far too much used" in this connection. This lends additional interest to the trials of weed killers on garden paths at Craibstone, the Experimental Farm of the North of Scotland College of Agriculture. The experiments have been described in detail in the "*Scottish Journal of Agriculture*" (1928, No. 2), and the following notes show the efficacy of the various chemicals tested:—

Common Salt.—The salt was applied at the rate of about 1 lb. per 100 square feet. It was applied broadcast and not in the form of solution. The salt was rather slow in its action, but had the effect of burning up the small plants. Where the plants had grown to any size, the salt had little or no effect, while towards the end of the season what effect the salt had seemed to be lost and weeds sprang up in even greater numbers.

Washing Soda.—This was applied as a 5 per cent. solution, about 2 gallons of this strength being sufficient to cover and saturate a plot of 100 square feet. The washing soda had no effect on the weeds, even after another dressing of like quantity and strength.

Iron Sulphate.—This substance is frequently a constituent of lawn sand, and is employed as a moss killer. Two plots were treated, one getting an application of 2 gallons of a 15 per cent. solution, while the other received 1 lb. of the dry powdered material at the beginning of the experiment, and a similar dressing about a fortnight later. On neither plot did the chemical exhibit the properties of a weed killer, rather the contrary.

Sulphuric Acid.—Although it is not regarded as advisable to recommend sulphuric acid as a weed killer for general use it was regarded as of sufficient interest to warrant a trial. The results were disappointing. The weeds were attacked for the most part around the collar, near the surface of the ground; the outer leaves died off, but the centre still flourished.

Copper Sulphate.—Of all the substances used in the experiment, apart from some of the proprietary weed killers, copper sulphate gave the greatest promise. The weeds were practically unaffected by the use of a 5 per cent. solution of the sulphate, but when applied as a finely-ground powder at the rate of 1 lb. per 100 square feet, it was proved to possess strong weed-killing properties. On a plot which received two dressings of the powder at intervals of a fortnight the weeds were entirely destroyed and remained so during three years, while it is considered that the effect will continue for several subsequent seasons. The success of powdered copper sulphate seems to depend on applying it under suitable conditions—dry weather before and after application being very necessary.

Sodium Arsenate.—Arsenic in the form of a 1 per cent. solution of sodium arsenate was not strong enough to affect the weeds. A further dressing caused the leaves to wither, but the plants were not killed. A stronger solution was subsequently tried with somewhat better results, but with the disadvantages noted with all arsenical weed killers, as is mentioned under the proprietary ones.

Carbolic Acid.—A 1 per cent. solution of crude carbolic acid gave negative results.

Sheep-dip.—A plot was dressed with a sheep-dip containing arsenic, diluting it to the strength recommended for dipping and applying 2 gallons of the diluted dip to the plot, but the results were not so good as those

obtained with some proprietary weed killers containing arsenic.

Proprietary Weed Killers.—Those tried may be classified as: (a) a liquid coal-tar product containing arsenic; (b) a liquid coal-tar product without arsenic; (c) an arsenical preparation, but sold in solid form and has to be dissolved in water. It consists chiefly of arsenic and caustic soda. All three kinds were decidedly good, but (a) and (c) had the disadvantage of blackening the paths, and it was found necessary, if the weeds were to be kept in check, to make several applications during the season.

Liquor from Gasworks.—Results from using liquor from the Aberdeen Gasworks were very unsatisfactory. This may be explained by the fact that the liquor distilled from any large gas-producing plant by up-to-date methods contains a very much lower percentage of plant poisons than is the case where older methods are employed.

Sodium Chlorate.—A proprietary article of which this forms the essential constituent and a 1 per cent. solution of pure sodium chlorate soon cleared a plot of weeds, and it remained so for the greater part of the season. Towards autumn the plot became green, due to a luxuriant growth of moss.

MOSS ON WALKS

An experiment on a small scale was initiated to find a means whereby moss and lowly plants like liverworts could be eradicated. Of the three substances tried iron sulphate gave the best results, the moss being blackened in twenty-four hours, though the liverworts proved more resistant. Caustic soda proved quite good, but owing to its nature the path was left in a sticky condition. Also, its strongly alkaline nature might have a detrimental effect on shoe leather and rubber tyres. Copper sulphate, although it tended to kill the moss, was slow, and had practically no effect on liverworts. The green growth which appears on concrete paths which are in damp positions or get little or no sunshine may be removed by a sprinkling of caustic soda and allowing it to become moist from the air. The path should then be gone over with an old brush and finally flushed with water.

It will be seen from the above results that arsenical weed-killers give the most satisfactory results. These preparations are generally sold in the form of a concentrated solution, for which the following is a typical formula:—

Arsenic	...	...	...	...	2 lb.
Caustic soda	...	...	...	...	1½ lb.
Carbolic acid	...	...	...	...	10 oz.
Water	...	...	...	...	12 gall.

The arsenic and caustic soda are dissolved in the water by boiling, the solution being allowed to cool before the carbolic acid is added. For use one gallon of this solution is diluted with 25 gallons of water and freely distributed on the weeds. It was shown by Mr. J. Rutherford Hill some years ago that arsenic is not necessarily effective as a weed killer. It is possible that the caustic alkali which usually accompanies it in weed-killing solutions plays an important part. Carbolic acid added to weed killers makes them more deadly; in fact, according to the Woburn Experimental Station a 5-per cent. solution of carbolic acid will kill "everything green." An arsenical weed-killer in powder form can be prepared as follows:—

Arsenic	...	...	...	...	1 lb.
Caustic soda	...	...	...	...	½ lb.
Sodium carbonate (dried)	...	...	...	...	½ lb.
Prussian blue	...	...	...	...	1 dr.

The experiments referred to above by no means exhaust the list of chemicals which have been recommended for use by various authorities, those given below being free of statutory poisons:—(1) Spirit of salt 2 parts, water 3 parts; (2) saturated solution of potassium bisulphate; (3) alum 7 lb., iron sulphate 7 lb., water 6 gallons. For use dilute one gallon with four gallons of water. Liquid arsenical weed-killer is generally treated as a Part II

poison, the reason being that it is not apparently included in Part I as "arsenic and its medicinal preparations," but is brought under Part II by the "omnibus" clause. The Arsenic Act does not appear to contemplate a liquid arsenical solution, as the colouring matter there prescribed (soot and indigo) are insoluble in water. The name of the poison is not necessarily poison—it may be weed-killer—but care should be taken not to disguise the

poisonous character of the liquid. The Labelling of Poisons Order requires preparations of this nature to be labelled with the proportion or percentage which the poison (or poisons) bears to the other ingredients. The regulations under Section 2 of the Poisons and Pharmacy Act, 1908, regarding the sale of agricultural and horticultural poisons apply to persons who are not registered chemists, and who hold poisons licences.

Mercury in the Control of Plant Diseases

BY T. N. WAKELY, B.SC. (HORT.)

FOR the past sixty years or so the value of this element has undoubtedly been recognised in relation to the control of a number of the most important fungus and insect pests of crop plants in this and other countries of the world. Corrosive sublimate is the compound which at first received the most attention on account of its toxicity to certain fungus and insect pests. Other mercury products, however, of a less toxic nature and greater efficiency in controlling plant diseases have now been evolved which deserve the notice of all those interested either in plant pathology or chemistry. There are two main fields in disease control where mercury compounds have become particularly conspicuous, namely, seed dressing and soil treatment. In the chemical treatment of seeds for the control of fungus diseases there are certain underlying principles which must be borne in mind. Prophylactic treatment, by which possible infection of the seed is effectively eliminated, is carried out at a time when host and parasite are separated in a state of dormancy. It is when they emerge from this condition, and germination takes place, that infection of the host by the disease occurs, and chemical treatment is no longer possible. Two sharply divided classes of seed-borne diseases must not be confused, viz., those borne on the exterior of the seed, and those carried in the interior. The latter class, which includes such diseases as loose smuts of wheat and barley (*Ustilago tritici* and *Ustilago nuda*), where the fungus passes the dormant period within the tissues of the embryonic plant, cannot be combated by chemical agents. Those diseases which are externally borne, however, such as bunt in wheat, loose smuts of oats, covered smut of barley, etc., can be successfully controlled by chemicals. Three main methods of seed dressing have been advocated at various times:—(1) Soaking; (2) sprinkling; (3) dusting. Special sterilisation of sacks, seed boxes, drills, etc., is quite unnecessary.

LIQUID SEED DRESSINGS

As far back apparently as 1755 solution of corrosive sublimate was tested as a seed disinfectant, but was reported on unfavourably. Later it was found by other American workers to be unsuitable for the control of bunt in wheat, oat smut and loose smut of wheat, owing to the high concentration and too long exposure. In the same year, 1891, Bolley developed the method of treating seed potatoes for the control of common scab, and was the first to work out successful controls for wheat bunt and barley smut. With oats, however, there was injury at the concentration required to control the smut. Hiltner developed mercurii perchloride for treatment of winter grains in Germany. Hot solutions of corrosive sublimate have also been used, with short periods of exposure for the combating of oat smut, barley stripe and potato scab. An important group of organic mercury compounds was introduced prior to the year 1912. Chlor-phenol-mercury had been found effective as a preservative of wood in connection with the study of dry-rot, but this was not developed commercially. It was then tested as a seed dressing, and reported in 1913 as effective in controlling bunt, a result which did lead to its commercial development.

DRY SEED DRESSINGS

By the year 1916 research was being carried out with a view to evolving organic mercury in a dust form for

seed treatment, and in 1925 a nitro-phenol-mercury compound was brought out. A number of other complex mixtures of organic arsenicals with mercury or copper for seed dressing were also introduced. At the present time the organic mercurials have reached a high stage of development as represented in this country by the dry dressing nitrochlorophenolmercury sulphate. This product is capable of controlling all the diseases previously mentioned as being carried on the exterior of the seed. One of the most marked properties of these organic mercurial compounds is their selective action in killing the disease germs and leaving the seed unharmed. In fact, it is well established that treated seed gives heavier crops of better quality, this effect being probably due indirectly to the suppression of disease organisms. Also there is evidence that at germination seed treated with these dressings is protected from harmful soil organisms.

SOIL TREATMENT WITH MERCURIALS

Mercuric chloride was probably used originally for the control of the cabbage root fly maggot (*Chortophila brassicae*), as reported in the "Country Gentleman," July 28, 1864. Definite experimental data were probably not published until 1893, when Beach (N.Y. Geneva Agricultural Experiment Station Bulletin 49) gave an account of spraying the furrows in which potato "sets" were placed with HgCl_2 for the control of potato scab. By 1895 this compound had been used in solution for controlling club root of crucifers, potato scab, etc., with promising results. Subsequently its use as a soil dressing has been extended for the control of a number of soil pests and diseases. Organic mercury in the form of chlor-phenol-mercury was found the most successful controllant of wart disease of potatoes (*Synchytrium endobioticum*) in experiments carried out during the year 1916. Club root of cabbages (*Plasmodiophora brassicae*) has also yielded to this treatment. Soil treatment with this chemical for the control of damping-off diseases had been very successful ever since the first work was done on these questions in 1921. Other diseases which have been effectively dealt with in this way are crown gall of fruit trees and manetti rose stocks caused by *Bacterium tumefaciens*, and brown patch of golf greens, lawns, etc., a condition brought about by attacks of fungi on the stems and blades of the grass. Seedling blight of rhododendrons is controlled by treatment of the seed beds prior to, at the time of, and subsequent to the planting of the seed, and draecena root rot, which attacks draecena terminatis, is effectively cured by standing the potted plants in a solution of this chemical. Mercury compounds appear to be particularly effective in dealing with the rhizoctonia diseases, such as *Rhizoctonia violacea* of potatoes and *R. solani*, which attacks potatoes and tomatoes. Experiments carried out in this country have proved that for the control of the latter, or foot rot disease of tomatoes, the best method is to remove diseased plants with the surrounding soil, water the holes with a 0.25 per cent. solution, and replant, giving the plants a top dressing. The particulars of the control of diseases already mentioned will serve to indicate the wide field covered by the organic-mercurial compounds as they are found to-day, and there is evidence that these compounds bid fair to become of even greater importance in the war against the enemies of our crops.

American Gooseberry Mildew

OWING to the fact that American gooseberry mildew had been present in this country for a quarter of a century, and the methods of control had not proved entirely satisfactory, a series of investigations on the subject were commenced at the Long Ashton Research Station, Bristol, in 1925. Comparative trials of four washes were carried out at Cheltenham, the spray fluids used being prepared as follows:—

<i>Ammonium Polysulphide</i>		<i>Washing Soda</i>	
Ammonium poly-sulphide ...	4 pints	Washing soda ...	19 lb.
Soft soap ...	5 lb.	Soft soap ...	11 lb.
Water ...	100 gall.	Water ...	100 gall.
<i>Soda-Sulphur Compound</i>		<i>Burgundy Mixture</i>	
Soda sulphur compound ...	10 pints	Copper sulphate... ..	15 lb.
Soft soap ...	5 lb.	Washing soda ...	34 lb.
Water ...	100 gall.	Water ...	100 gall.

Particular care was taken to spray the lower parts of the bushes and the undersides of the leaves. The first three sprays were used on April 28, and the last on June 5, and when the berries were picked on June 23-25 the percentage of mildewed fruit was as follows:—Sprayed with ammonium polysulphide wash, 4.2; soda-sulphur compound, 2.2; washing soda, 4.5; Burgundy mixture, 22.3; no spray (control), 43.7. It will be seen that good results were obtained with the first three sprays. The time of the first application of the spray is considered important as at that date no sign of disease could be seen, yet it would appear that some infection centres, originating from the winter spores, must have been present. In the case of the last spray mildew had become visible before it was applied, so that it was evidently too late to check the disease effectively. When this spray is applied after the berries are half-grown the latter are rendered unsaleable owing to the deposit on their surfaces. In the following year it was decided to test the Burgundy mixture at a sufficiently early stage, and since most growers are averse from spraying their bushes twice the relative merits of one application of the mixture were tested against one and two applications of the ammonium polysulphide. (The strength of the Burgundy mixture in this case was 8-20-100.) The first application of these sprays was given on April 22—immediately after the setting of the flowers. At this time no mildew was visible. No damage was observed on any of the bushes sprayed with the polysulphide, but after about ten days the leaves of the bushes sprayed with Burgundy mixture showed a certain amount of spotting, and this was followed by a negligible amount of leaf drop. The set and ripening of the fruit was in no way affected. The second spraying with the ammonium polysulphide was given on May 18. The fruit was picked on June 21, and the percentage of mildewed fruit was as follows:—Sprayed with ammonium polysulphide (once), 15.5; ammonium polysulphide (twice), 5.6; Burgundy mixture (once), 4.3; control, 39.9. It will be seen that one early spraying with ammonium polysulphide gave a considerable degree of control, but a second application not only gives a more complete control as regards fruit, but also considerably checks development of mildew on new wood, which is a potential source of danger in the following season. The Burgundy mixture in this trial gave as good a control as two applications with the polysulphide. Its efficacy is regarded as due to the spreading power of the fluid, and to the lasting character of the deposit. Its value lies more in its power of forming a toxic preventive film than in its use as a "hitting" spray; for the latter purpose a "wetting" spray containing soap is to be preferred. The pooriness of the degree of control obtained in experiments carried out at another centre is accounted for by the fact that the situation of the plot was exceptionally favourable for attack by the disease, and heavy rain having impaired the value of the sprays after application. The soda and soap is undoubtedly toxic to mildew, but it must be applied as often as weather conditions render is necessary.

EXPERIMENTS DURING THE 1927 SEASON

The experiments were continued during 1927, and a detailed account of the results is given by R. M. Nattrass in the "Annual Report of the Agricultural and Horticultural Research Station," Long Ashton. It was considered that, as the relative values of the two types of spray, i.e., the "hitting" type (such as the ammonium polysulphide and soft soap, and the soda and soft soap) and a "protective" spray (such as Bordeaux mixture and Burgundy mixture), had already been demonstrated, powdered sulphur and a proprietary colloidal sulphur should be tested against standard ammonium polysulphide. Two series of trials were carried out—one in Cheltenham and the other in Evesham. In the former district the bushes treated with the colloidal sulphur and the polysulphide were sprayed once only. In the case of the flowers of sulphur, the bushes were treated twice. The polysulphide spray was prepared according to the formula given previously, the other one being as follows:—

<i>Colloidal Sulphur (liquid) and Soft Soap</i>	
Colloidal sulphur ...	5 lb.
Soft soap ...	5 lb.
Water ...	to 100 gall.

The first application of all three materials was made on April 27, the further application of the flowers of sulphur being made on May 26. The fruit was picked on July 4 and 5, and results were as shown below:—

Fungicide	Times applied	Date	Percentage of mildewed berries
Ammonium polysulphide	Once	April 27 ..	17.6
Colloidal sulphur ..	Once	April 27 ..	10.2
Flowers of sulphur ..	Twice	{ April 27 } ..	5.8
Control	No spray	{ May 26 } ..	69.0

It will be seen from the very heavy infestation of the control plot that the conditions were very favourable to the disease. Two applications of flowers of sulphur reduced the amount of mildew from 69 per cent. to 5.8 per cent. This, under the circumstances, can be considered a good commercial control. The ammonium polysulphide applied once gave a reduction to only 17.6 per cent. of mildewed berries. This result once again emphasises the fact that a "hitting" spray of this type must be applied more than once unless the weather conditions are very unfavourable to the disease. The colloidal sulphur spray fluid appears to act as a "protective" spray rather than a "hitting" spray. It remains on the foliage for a considerable time, and in this experiment no signs of scorching were observed. In the Evesham experiments the following materials were used:

- A.—Amberene 2 gall.
- Soft soap 5 lb.
- Water to 100 gall.
- B.—Colloidal sulphur (as above, but 4.5-100).
- C.—Flowers of sulphur.
- D.—Ground sulphur.
- E.—Green sulphur.

Two applications were given, the first on April 13 and the second on May 16. The results were as follows:—

Fungicide	Date	Percentage of mildewed berries
Colloidal sulphur	{ April 13 } ..	6.7
Amberene	{ May 10 } ..	6.4
Flowers of sulphur	May 10 ..	3.1
Ground sulphur	May 10 ..	1.0
Green sulphur	May 10 ..	1.6
Control	No spray	54.5

It will be seen from the above figures that excellent control was obtained by the three forms of powdered sulphur. Under the conditions of this experiment the differences between the three figures 3.1 per cent., 1 per cent. and 1.6 per cent. are not considered to be significant.

Agricultural Notes

SOUTH AFRICAN WHALE GUANO

THE whaling season commences about May 1 and shipments of guano as a rule start in June and July. The disposal of the supplies has not, in the past, followed any fixed channel. Prices vary from year to year, and the guano is sold only after a canvass has been made of the principal markets. In the majority of instances it has been sold through London brokers. There are at least two manufacturers in Cape Town engaged in the production of whale guano, and, according to official statistics, 2,483 tons of "guano" and 2,061 tons of "other whale manure" were exported during 1926, the United Kingdom, Ceylon and the United States being the chief outlets.

DESTRUCTION OF RABBITS WITH CARBON DISULPHIDE

AN account of the fumigation of rabbit burrows with carbon disulphide is given by S. L. Black, in the March 1928 issue of the "Agricultural Gazette of New South Wales." The amount of the chemical used varied with the size of the burrow, but six were fumigated during the day and required a one-gallon tin of carbon disulphide, which worked out at about 1½ lb. In addition to the carbon, a smoke mixture was also used in the fumigator in order to make the fumes visible. As each hole was treated it was closed up. About two hours after the treatment of the first burrow was completed some dead rabbits were dug out. Prior to the demonstration rabbits had been seen in large numbers, while a week later the burrows remained unopened.

PROTECTION OF GRAIN AGAINST WEEVILS

REPLYING to an inquiry regarding the possibilities of copper carbonate for control of weevil in maize in store, the Chief Inspector of Agriculture ("Agricultural Gazette of New South Wales," June 1928), pointed out that seed wheat is treated with copper carbonate powder primarily for the prevention of the fungous disease "bunt," and for this purpose the copper carbonate is mixed with the seed at the rate of 2 oz. to every bushel by means of a machine that ensures that every grain is coated with the powder. It has been proved that if for any reason it was necessary to hold this treated seed for a year, weevil infestation was prevented by the copper carbonate, but he did not consider that the powder would cling satisfactorily to maize or other smooth-coated seeds. A cheaper and more effective method of preventing weevil in stored maize was to store the grain when dry enough in air-tight galvanised iron tanks and treat with carbon disulphide.

BORDEAUX MIXTURE AND ARSENIC

THAT Bordeaux mixture can be combined with arsenicals has long been known, and these mixtures have been widely used in practice. The interaction of Bordeaux mixture with lead arsenate and calcium arsenate has lately been studied by N. Goodwin and H. Martin ("Journal of Agricultural Science," July 1928) by an examination of the effects which are produced; (a) When hydrated lime is added to arsenical compounds; (b) when copper sulphate is added to arsenical compounds and hydrated lime. The nature of the interaction of calcium hydroxide and diplumbic hydrogen arsenate is most complex and results in decomposition of part of the lead arsenate and the formation of basic calcium arsenates. When the lead arsenate, in water, is allowed to interact for long periods in excess of hydrated lime, the amount of basic calcium arsenates formed is such that large quantities of arsenic are brought into solution by the action of carbon dioxide. Under conditions when calcium hydroxide is rapidly converted into the carbonate the amount of arsenic rendered soluble is slight. The conclusion is that in actual spraying there is a definite reduction of the risk of arsenical injury when hydrated lime is added to lead arsenate and calcium arsenate. When conditions are such that the addition of hydrated lime brings about a reduction of arsenical injury, the use of an "equal-lime" Bordeaux mixture containing an equivalent amount of calcium hydroxide would prove far more effective.

MAKING AXLE GREASE

ACCORDING to A. A. Ramsay ("Agricultural Gazette of New South Wales," June 1928) there are two types of lubricating axle grease in use:—(1) Resin greases, which are essentially solutions of calcium resinate in resin oil; and (2) lubricating greases, which are essentially semi-solid or solid emulsions of fats, fatty oils, mineral oils, and resin oils with lime-soda or metallic soap. Axle greases are usually of the first type, and are prepared by stirring dry slaked lime, freed from all gritty particles by careful sifting, into mineral oil until a homogeneous mixture is obtained, and then adding resin oil containing "resin acids." The proportions of lime and mineral oil usually taken are five and ninety-five. This mixture forms the "stock." Into the stock a resin oil is run, and the mass carefully stirred and allowed to stand. The following is a recipe for axle grease, using resin oil only:—Slaked lime, 8 parts, slowly stirred into resin oil, 10 parts. Stir to incorporate thoroughly, and heat gently till of syrupy consistency. Heat 275 parts of resin oil with 1 part slaked lime and then allow to cool. The supernatant oil is removed from the precipitated matter and 5 or 6 parts of the foregoing resin oil-lime-soap are stirred in till all is a soft unctuous mass.

INSECTICIDES IN SPAIN

OF insecticides and other preparations having bases of copper and arsenical salts, Spain imported during the calendar year 1927 a total of 156 metric tons (metric ton equals 2,204.6 pounds), of which the United States and France supplied approximately 25 per cent. each and Great Britain between 15 and 20 per cent. Most of these preparations were for agricultural rather than household use. The need for household insecticides in Central Spain is limited by the fact that during the warm months there is very little rain, and consequently fewer flying pests, except moths, than are encountered in a more moist climate. The market, therefore, is chiefly for preparations to combat bed bugs and fleas and compounds usually in powder or cake form with camphor bases, to oppose the ravages of moths. The unlimited importation of any preparation, liquid or solid, containing petroleum has practically ceased since January 1, 1928, when all trade in petroleum products passed into the control of a national monopoly. Now all mineral oil derivatives, for whatever use, are either imported or manufactured under the direction of that organisation; are manufactured by Spanish firms which purchase their petroleum supplies from the monopoly, or are imported under special licences granted by the monopoly.

CHILEAN NITRATE

PRODUCTION and consumption of nitrogenous fertilisers has continued to expand during the past year. The steady improvement in the relative position of the Chilean article during the last two years is primarily due to its price having come more into line with other nitrogenous products. The feature in the nitrogen industry has been the changed method of selling adopted by the Chilean nitrate producers at the instigation of and with a subsidy from the Chilean Government. After one year of free selling, when prices both in Chile and in consuming markets were allowed to fluctuate according to the vagaries of supply and demand, producers have fixed prices and conditions of sale in all the consuming markets of Europe and Egypt, and by introducing a form of centralised selling, exercise a full measure of control on all who participate in the sale and distribution of nitrate. By fixing values at moderate levels, producers have made it possible for Chilean nitrate to compete successfully with synthetic nitrogenous products. During the last six months port deliveries amounted to 695,000 tons, against 729,000 in the previous year, a decrease of 34,000 tons. Europe shows an increase of 62,500 tons; Egypt a decrease of 18,500 tons; the United States a decrease of 65,000 tons; and other countries a decrease of 13,000 tons. The increase in European deliveries is attributed to the operation of the centralisation scheme and the low level of prices.



THE CHEMIST AND DRUGGIST

RETAIL & DISPENSING

PRICE LIST

 based on definite costing principles

ISSUED QUARTERLY EIGHTH YEAR OF PUBLICATION

THE changes in prices for January are comparatively few and unimportant. The drug index rose slightly from 134.7 in the previous month to 135.3. In surgical dressings further lowering of the price of wool and lint had the effect of reducing the index from 190.4 to 186.8. The changes are, involving alterations in retail values, as follows:—

Cost			Selling Price			
			16 oz.	4 oz.	1 oz.	1 dr.
d.	per		s. d.	s. d.	s. d.	s. d.
42	lb.	Acid. citricum ..	5 3	—	—	—
43	lb.	Acid. citrici pulvis ..	5 4	—	—	—
36	lb.	Ammon. persulphas ..	—	1 4	0 5	—
102	lb.	Balsamum toltanum ..	—	3 9	1 1	—
33	dr.	Berberina sulphas ..	—	—	—	4 10
11	oz.	Calcii glycerophos. ..	—	—	1 8	—
42	lb.	Cera alba in massa ..	5 3	1 6	0 5	—
44	lb.	Cera alba in placentis ..	5 6	1 7	—	—
24	oz.	Ext. krameria pulvis ..	—	—	3 6	—
48	lb.	Naphthalin. pur. ..	—	1 9	0 6	—
45	oz.	Piperazina ..	—	—	6 7	1 0
42	lb.	Sodii benzoas artif. ..	—	1 6	0 6	—

Trade Notes

HAIR CLIPPERS for surgical, veterinary and tonsorial purposes can be supplied by Burman & Sons, Ltd., Birmingham.

THE sole agents for Marienbad waters and associated products are Miltism Laboratories, 34 London Wall, London, E.C.2.

WEED KILLERS specially packed for the chemist's trade are offered by Battle, Hayward & Bower, manufacturing chemists, Lincoln.

MORRIS, LITTLE & SON, LTD., Premier House, Southampton Row, London, W.C.1, specialise in horticultural preparations.

REPRESENTATIVES desirous of joining a well-known and old-established firm should read p. 43 of the advertisement pages in this issue.

BATTLE'S VERMIN KILLER is prepared by Mr. J. C. M. Battle, Ph.C., Lincoln. Supplies may be obtained through the usual wholesale channels.

ANTIPHLOGISTINE.—The Denver Chemical Manufacturing Co., 41 St. Ann's Road, London, E.3, invite chemists to write for a quotation and so secure extra discounts.

TIBO PRODUCTS CO., LTD., Audrey House, Ely Place, London, E.C.1, announce that the closing date of the Rinex window display competition has been postponed until March 31.

A SAMPLE OFFER.—R. F. White & Co., Ltd., Grove Mills, London Road, Mitcham, are prepared to send chemists a sample of toilet soap such as is referred to in their advertisement.

REVISED PRICES.—The Kraska Co., Ltd., 65 Portobello Road, London, W.11, give details of the new wholesale and retail prices of Kraska manicure specialities in their advertisement in this issue.

PESTICIDES.—Kay Brothers, Ltd., Stockport, offer to supply leaflets to chemists informing them of trade terms and other matters concerning the selling of Dak ratline and Orbite tree banding material.

G. H. RICHARDS, LTD., 234 Borough High Street, London, S.E.1, proprietors of the well-known XL All horticultural preparations, raise an interesting question in their advertisement in this issue.

A FEBRUARY OFFER.—H. Bromley & Co., Ltd., Acton Vale, London, W.3, give particulars elsewhere in this issue of a special offer they are making during February in connection with their bath soap.

EUREKA weed killer, worm killer and lawn sand are preparations known to all agricultural chemists, and the manufacturers, Tomlinson & Hayward, Ltd., 51 Newland, Lincoln, offer to send suitable advertising material to C. & D. subscribers who require it.

AUTOMATIC VENDING MACHINES.—British Automatic Vendors, Ltd., 60 Holborn Viaduct, London, E.C.1, illustrate one of their automatic machines on another page in this issue, and chemists interested should write for a brochure, which gives additional details.

WRIGHT, LAYMAN & UMNEY, LTD., manufacturing chemists, 44-50 Southwark Street, London, S.E.1, ask us to assure C. & D. subscribers that the business has not been sold, nor are there any negotiations pending with reference to the sale of the business or any part of it.

ABSOLUTE ALCOHOL.—The German firm of E. Merck, Darmstadt, is building in England a plant for dehydrating ethyl alcohol, which has been ordered by an English firm in this country. The plant is of considerable size, and will be worked according to a process (invented by E. Merck) which is covered by a British and an Irish patent.

CLEMENTS' CATALINE.—The Cataline Co., Ltd., Bristol, give a number of particulars relating to their product in the advertisement pages. It is interesting to note that the company does not employ travellers to call on farmers, all advertisements refer to the chemist as the source of supply, and the preparation is protected under the scheme of the Proprietary Articles Trade Association.

W. J. CRAVEN & Co., LTD., Evesham, whose advertisement appears elsewhere in this issue, are horticultural chemists (Mr. W. J. Craven passed the Qualifying examination in 1890), and not only specialise in the various articles mentioned, but are prepared to assist chemists in connection with any problems on agriculture and horticulture. A price list of the company's agricultural products will be sent on application.

ATTENTION is called to the advertisements printed in red and black in this issue, where will be found announcements by the following: Butler & Crispe, druggists' sundriesmen, 80 and 82 Clerkenwell Road, London, E.C.1; Perfumeria Gal (London), Ltd., soap manufacturers, 76 Strand, London, W.C.2; Potter & Clarke, Ltd., 60-64 Artillery Lane, London, E.1; Stafford Allen & Sons, Ltd., Cowper Street, London, E.C.2.

LYSOLATS.—Solidol Chemical, Ltd., Ashmead House, Disney Street, London, S.E.1, have instituted a special window display bonus scheme, particulars of which will be found elsewhere in this issue. Lysolats are among the most efficient of disinfectants. They contain 90 per cent. of mixed cresols, and are standardised to contain 50 per cent. meta, the remainder being ortho- and para-cresol. Experiment has demonstrated that for bactericidal action meta is the strongest and ortho the weaker. Tests by various authorities, we are informed, show in disinfecting power Lysolats have ten times the efficiency of carbolic acid and three to four times that of the usual saponified solutions of cresol.

ETHER.—In consequence of the recommendations of the Anaesthetics Committee of the Medical Research Council and Royal Society of Medicine and the necessary conditions of the Customs authorities having been complied with, May & Baker, Ltd., manufacturing chemists, Battersea, London, S.W.11, are now enabled to send out Baker's Anaesthetic Ether and Ether B.P. made solely from rectified spirit, which, being duty-free, will involve no higher charge than when made from methylated spirit as hitherto. This will result in the supplying of anaesthetic ether, absolutely free from methylic products, aldehydes, peroxides and other deleterious compounds, at less than a quarter of its former price when made from pure spirit. Industrial ethers are unaffected and will still be made from methylated spirit.

Deaths

BOWIS.—On January 25, Mr. William John Bowis, O.B.E., Ph.D., F.I.C., chemist and druggist, a director of Boots Pure Drug Co., Ltd., Station Street, Nottingham. Dr. Bowis was born in Nottingham in 1881, and was educated at the People's College. He entered the employment of Sir Jesse Boot in 1897, and was at first engaged in the firm's analytical laboratories. From 1903 to 1905 he studied chemistry under Professor Alfred Werner at the University of Zurich, and took part in Werner's researches on the co-ordination compounds of cobalt, receiving the Ph.D. degree of Zurich University in 1905. His work was subsequently published. After this he had a practical training in pharmacy and became a member of the Pharmaceutical Society in 1908. Dr. Bowis then returned to industrial work, and was largely responsible for the development of the soap and perfumery business of Boots Pure Drug Co., Ltd., of which he became a director in March 1909. During the war he took a large part in organising the production of gas masks in Messrs. Boots' factories, and received the O.B.E. in 1919. He was also a Fellow of the Chemical Society, and member of the Society of Chemical Industry and of the Chemical Club. A widow survives him. Dr. Bowis was a man of great ability and of very genial disposition, and the loss created by his death will be greatly felt.

QUELCH.—At Mentone, on January 25, after a long illness, Mr. Henry Woodgate Quelch (A. Bourjois et Cie, Ltd., 4 Water Lane, London, E.C.4), eldest son of Mr. H. C. Quelch, Kinnaird Avenue, Bromley, Kent, aged fifty-one. From early years Mr. Quelch was associated with his father, Mr. Henry C. Quelch, in the firm of H. C. Quelch & Co., and he was taken into partnership in 1900. The business made great strides in its agency connections, and to this section Mr. Quelch devoted himself with great ability and characteristic energy. His devotion to his work was the cause of a breakdown in health two years ago, from which he never recovered. When A. Bourjois et Cie, Ltd., was formed in 1919, Mr. Henry C. Quelch and his son disposed of their agency and sundries business, and devoted their time to the business of Messrs. Bourjois. Mr. Henry W. Quelch's many friends will long retain recollections of a pleasing personality and a generous disposition. He leaves a widow.

QUINCEY.—At his residence, Oakwood, Chislehurst, Kent, on January 26, Mr. E. de Q. Quincey, aged sixty-six. Mr. Quincey was sole partner of the firm of Richard Quincey & Son, merchants, 143 Fenchurch Street, London, E.C.3.

STRONG.—At "Redlands," Bickley, Kent, on January 24, Mr. Herbert Strong, of Herbert Strong & Co., spice and colonial produce brokers, 60 Mark Lane, London, E.C.3, aged sixty-five. Mr. Strong commenced his Mining Lane career with Green and Pitt, an offshoot of Lewis & Peat. He was also with the late Mr. Alfred Lambert, with whom he entered into partnership as Lambert and Strong. This partnership was dissolved in 1905, and subsequently Mr. Herbert Strong commenced business as a colonial produce broker as Herbert Strong & Co.

THOMPSON.—On January 19, Mr. Frederick William Thompson, Ph.C., head of the pharmacy department of the Leicester College of Technology. Mr. Thompson, who passed the Major examination in 1902, was head of the pharmacy department of the College for several years. At the funeral service, held at the church of St. James the Greater, the following colleagues from the College acted as bearers: Messrs. G. E. Mailey, A. E. Davies, A. W. Buswell, A. L. Aldwinckle, G. Pollock and R. L. Sutton. Among those present were Messrs. L. W. Kershaw (principal of the College of Technology, E. M. Balmforth (vice-principal), A. R. G. Chamings (pharmacy department), and a large number of students. The chemists present included:—Messrs. A. E. Young, E. B. Ward, S. Squires and W. Westhead (forming the advisory committee to the college); Messrs. F. H. Clark and R. J. Dickson (president and secretary of the local branch of the Pharmaceutical Society);

Messrs. A. H. Spiers and H. A. Martin (chairman and secretary of the local R.P.U. branch); and Miss Langham.

TURNER.—At Monton, Eccles, recently, Mr. Andrew Harper Turner, chemist and druggist. Mr. Turner qualified in 1899. He

was one of the founders of the Manchester and District Pharmaceutical Golfing Society, and had been its captain. The many friends he made at the various club matches will miss his genial personality very much. The interment took place on January 25 in the family grave at Peel Green Cemetery. The members of the Manchester and District Pharmaceutical Golfing Society who attended the funeral were Messrs. Cleworth, Collins, Kidd, Miller, Stout, Stuart, Sturdy and Woodhead; and Messrs. R. Beck and J. Lomax

were among other pharmacists present. The many wreaths included one from the members of the Pharmaceutical Golfing Society.

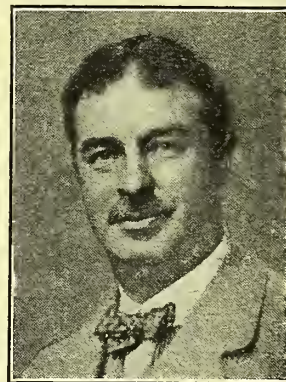


Photo [Cleworth]
MR. A. H. TURNER

Personalities

MR. A. W. HENDERSON, chemist and druggist, "Bow-lins," Lancaster Road, Harrow, has been appointed staff manager of the retail branches for The Reliance Rubberware, Ltd. Mr. Henderson's headquarters will be 265-267 Oxford Street, London, W.1.

MR. GUY MURISON, chemist and druggist, Midland and Home Counties medical representative for Keen, Robinson & Co., Ltd. (associated with J. & J. Colman, Ltd.), is going on a trip to Canada and is sailing from Southampton on February 14 by s.s. "Alaunia." He expects to be away for about six months.

MR. L. A. LYALL has been appointed president of the Permanent Central Board of the League of Nations, set up by the Geneva Convention of 1925 (C. & D., 1925, I, 391). Mr. Lyall, who was born in London in 1867, entered the Chinese Maritime Customs in 1886. After being Chinese secretary to the Inspectorate-General of Customs at Peking for some time, he was made Commissioner of Customs at Shanghai. On retiring from that office in 1927, Mr. Lyall became assessor to the Advisory Committee of the League of Nations on the Traffic in Opium and Dangerous Drugs. He is the translator of the chief works of Confucius under the title "The Sayings of Confucius." The Council of the League has also appointed the following representatives as members of the Permanent Central Board: Dr. O. Anselmino (German), M. C. J. J. Bonin (French), Professor Giuseppe Gallavresi (Italian), M. H. L. May (American), M. M. Miyajima (Japanese), Sir B. K. Mullick (Indian), M. Henrik Ramsay (Finnish).

Information Department

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Postal or telephone information with respect to makers or first-hand suppliers of the undermentioned articles will be appreciated

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E/281. Bennett's hysoop cure	cream
E/281. Coreine (French)	M/241. Salihexin
E/281. Gliadin	E/281. Spino-hemal (or similar name)
A/241. Glanite for chilblains	M/221. V-shape safety razor
B/251. Hurst's or Hirst's inhaler	blade sharpener

Observations and Reflections

By Xrayser III

Co-operative Traders

recognise the need for direct representation and influence in Parliament (*C. & D.*, January 26, p. 87), and it is to combat the growth of such influence that chemists and druggists equally need direct representation at St. Stephens, just as much as for other purposes. It is necessary to recognise that co-operative trading is now largely a masked form of capitalistic opposition to maintenance of the principle of individual ownership. Co-operative stores do not supply their members with goods at markedly lower prices than do private traders; as a matter of fact, they often charge more than the latter. But they attract custom by the pernicious system of allowing rebates on increased prices, and we all know how the accumulated rebate system affects the mind of the ordinary shopper.

Co-operative Societies' Methods

cannot, as a matter of course, commend themselves to individual traders. A certain amount of confusion always creeps into discussions on dividends, particularly when supporters of co-operative methods take part in them. The individual trader's case, however, is quite clear and simple. He knows that, in one way or another, purchasers of goods at co-operative stores manage to get them at lower prices than he is willing or permitted to charge. Naturally enough, he resents this, the more particularly when he finds that it is not only actual members who reap benefit in this way. What we chemists want to know is how to prevent any private purchaser from obtaining at co-operative stores for less than, say, a shilling an article which we are not allowed, in any circumstances, to sell except at the fixed price of a shilling.

It Would be Idle

to suppose that anything we or our representatives may say or do will be permitted to interfere seriously with a settlement of our affairs, in the event of legislative action, in a way that is considered best adapted to serve the public interest. We can, however, safeguard our interests to some extent by securing adequate representation in Parliament at the coming general election. One reform that does not appear to have been mentioned in the recent discussion in North London (*C. & D.*, January 26, p. 92) is that involved in the suggestion that it should not be permissible for a pharmacy to be conducted except under the name, prominently displayed, of its actual owner or owners. Not only are multiple-shop concerns buying up chemists' businesses and carrying them on under the names of the original proprietors, but co-operative societies are pursuing a similar course, and I have heard of unqualified individuals doing the same thing. It is incomprehensible to me that anyone holding a special qualification such as ours should ever entertain the idea of permitting the purchaser of his business to continue to use his name in connection therewith. I know there is often a certain amount of goodwill attaching to the use of the name in such instances, but one's pride in one's name and reputation should forbid the thought of selling even the ghost of one's personality. This applies equally, in my opinion, to all instances of transfers of ownership of pharmacies; but in the public interest it is particularly applicable to changes from qualified individual ownership to control by limited companies, co-operative societies and unqualified individuals.

Is it Legitimate

to reduce the potency of medicaments such as chlorodyne, even when actuated by a highly creditable motive, as in the case of the correspondent whose letter on the subject appeared recently in your columns (*C. & D.*, January 26, p. 111)? While this sort of thing might with advantage be done by anyone actually in charge of a patient, there is always a risk of trouble if it should be done by the chemist supplying the patient direct. It may happen in this way. The customer may derive comfort from the use of the modified

preparation; but some day, after having become accustomed to the taking of maximum doses of the latter, circumstances necessitate obtaining an urgency supply from another chemist who sells the more potent article. An equivalent dose of the latest purchase may cause serious trouble, if not a fatal result, and that is why it is always dangerous to play tricks with the strength of potent medicinal preparations.

"About What Time

did it become customary for the dispenser to return the prescription to the patient?" is a question which arises in my mind when reading your note on "Title to Prescription" (*Commercial Compendium, C. & D.*, January 26). Some light might be thrown on the matter if reference could be made to the old prescription-books belonging to historic pharmacies. Perhaps many of these books are not now in existence; but it would be interesting to some of your readers if the proprietors of the old establishments would give some particulars of the records which are extant. The oldest I have seen is before me now, and was begun in 1829. I fancy it was not unusual in the eighteenth century for the chemist or apothecary to retain the prescription when there was a closer association between the physician and apothecary than is now considered to be seemly. The early prescriptions which "Antiquus" was fortunate enough to secure do not assist much in this matter, because it was not beyond the ability of educated people of the seventeenth and eighteenth centuries to copy quite correctly as well as translate manuscript prescriptions.

Several of the Preparations

in the said prescriptions are now obsolete, but they are interesting to the antiquarian, and to the historian. There is one article which seems to call for a note from the point of view of the latter, namely, the tincture of castor. It would appear that Mrs. Evers had been in communication with a "Monsieur Charas"; while the prescriptions were written by "a Dr. Friend." There is an association here which is interesting. In the first place there is, I think, not much doubt that "Dr. Friend" was Dr. John Freind, the bi-centenary of whose death was noticed in the *C. & D.*, 1928, I, 112. It was not unusual for the name to be spelt "Friend," a form in which it appears in the list of Fellows of the Royal College of Physicians in the London Pharmacopœia for 1721. The tincture of castor would have come under the notice of Freind while the Pharmacopœia was undergoing revision; but it seems possible also that he may have been on corresponding terms with Moses Charas, for this is apparently the French physician to whom Mrs. Evers wrote. Charas had given very considerable attention to the production of a tincture of castor, as will be seen on reference to his "Pharmacopée Royale," and it may have been on his advice that it was employed for Mrs. Evers. This preparation was something of a novelty. Tinctures, as a class, practically began their career in the seventeenth century. This was one of twelve which were first officially recognised in the *Pharmacopœia Londinensis* 1677, and the formula for it was almost certainly inspired by Charas. In his directions he provided for a tincture made by digestion of the glands, and also for the making of a spirit by distillation. The English authorities gave instructions for the maceration of the glands in a previously distilled spirit of castor. Their spirit, however, differed from his in respect of certain aromatic substances being also employed. This was the tinctura castorei used by Mrs. Evers for her troubles which were, we may presume, of a distinctly feminine complexion.

The Convenience

of tinctures was very soon evident to the medical faculty. They afforded a ready means of making extemporaneous medicines, and their popularity grew apace. A glance through the formulary books of the eighteenth and nineteenth centuries will provide evidence of their great influence in pushing into the background the laboriously compounded articles generally prescribed two hundred years ago.

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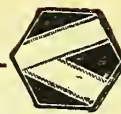
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Editorial Articles

English-Grown Pyrethrum

THE use of certain species of pyrethrum (*Chrysanthemum*) for insecticidal purposes has been known for a considerable period of time; Dalmatian, Persian and Caucasian insect powders consist of the ground flowers, respectively, of *Chrysanthemum cinerariaefolium* Trev., *C. coccineum*, Willd., and *C. marschallii*, Ascher (syn. *Pyrethrum roseum*, Bieb.), though there appears to be some doubt whether the two last-named are distinct species. The first-named has been grown in Dalmatia and Japan for a number of years, and its cultivation has steadily spread to almost all parts of the world, though only spasmodic and half-hearted attempts have been made to raise the plant in this country. A preliminary report on the experimental cultivation of pyrethrum in England, and which was published recently in the "Journal of the Ministry of Agriculture," described the results of the work up to the close of 1926, while later research on the

subject is dealt with by Friese, Tattersfield and Gimingham in "The Annals of Applied Biology" (1928, No. 3). Seed of pyrethrum, *Chrysanthemum cinerariaefolium*, both of European and Japanese origin was obtained, the former being produced at Lausanne (where experiments in the cultivation of pyrethrum have been in progress for some years), and the latter was of the standard commercial quality used for growing crops in that country. European accounts invariably recommend that the plants be grown on poor calcareous soils, but it was deemed wise in these experiments to try different plots, as follows:—Harpenden (clay with flints); East Malling (light loam over greensand); Newton Abbot (a sticky Devonian sandstone); Scilly Isles (light sandy granite soil); Sparsholt (light calcareous loam); Swanley (light thin loam on chalk); Wye (chalk with patches of light loam). Pyrethrum is a perennial which under English conditions requires rather more than a year before it comes into full bearing. Under Harpenden conditions the best results were obtained by sowing in autumn, the young plants being wintered in cold frames. It would seem that the plants are hardy under English conditions as they have withstood, without apparently suffering, the winters of 1925-26 and 1926-27. In France, a plantation is expected to last from eight to nine years, but it is improbable that so long a duration would be obtained in England. In commercial circles it has become the established convention to regard as good samples only those containing flower buds in the almost closed condition. The results of certain investigations in France and elsewhere suggest, however, that this convention is without foundation. Since a considerably greater weight of crop can be obtained from a given area if harvest is delayed until the flowers are nearly open, it was decided to test flowers cut at different stages. Although it is not proposed to discuss the economic possibilities of pyrethrum growing until more information is available, it may be mentioned that at Harpenden 1 rod of Swiss pyrethrum yielded 5 lb. of dried flowers in 1926, and 2 lb. 12 oz. in 1927, when cropped for the second time, whereas in 1927 1 rod cropping for the first time gave 3 lb. 5 oz. The average yield of all "Swiss plots" in 1927 was 3 lb. 14 oz. per rod. A conservative estimate of the yield in France is given as 2½ lb. (approximately) per rod, and it is clear that English yields compare not unfavourably with this. The toxicity to *Aphis rumicis*, L. (black bean aphid), and to certain caterpillars of spray fluids prepared from samples of pyrethrum grown in England have been quantitatively determined, and the flowers from the six different localities showed only slight differences. For practical purposes all the samples had approximately the same toxicity, and they did not differ in this respect significantly from a sample grown on the continent. Also, the toxicities of extracts of equal weights of pyrethrum flowers tested at different stages of development differed very little. As in a wet summer there might be some difficulty in drying the crop in the ordinary way some tests were made to ascertain if artificial drying could be adopted without loss of toxic properties. A large sample of fully open flowers was divided into three portions which were treated in the following way:—(1) Placed in a drying room at 40-50° C. for twenty-four hours and ground before extraction; (2) dried at ordinary temperatures for fourteen days and ground before extraction; (3) put into 95 per cent. alcohol without drying or grinding. There was a loss on drying in the first two cases of 72.5-73.3 per cent., the dried samples on heating in an electric oven to 104° C. showing a further loss of 14.4 per cent. The results of this experiment show that there is little or no difference between the three samples and that artificial drying or even pickling can be employed without loss of toxic properties. From this it may be deduced that air-drying need not be an insuperable

objection to the growth of pyrethrum in this country. Comparative tests were also carried out on the stalks, and on the disc, and on the ray corollæ separately. It was found that the complete flowers were more than ten times as toxic as the stalks weight for weight; that the ray corollæ were not toxic, but that the disc corollæ were apparently more toxic than the stalks. The corollæ are frequently shed in the drying process, but they are obviously of little commercial importance. Large quantities of the stalks are however available, and their use has some justification, provided they are treated by some suitable extraction process. It is commonly stated that pyrethrum powder loses its toxicity very readily, though it was shown by Abbott (United States Department of Agriculture Bulletin 771) that under reasonable storage the flowers are much more stable than is commonly supposed. Experiments with the English-grown pyrethrum confirm this, though, naturally, under sufficiently drastic conditions it can be made to lose its toxicity. After the crop is gathered it should be dried at once to an extent which will not allow of fungus growth, but if then properly stored, e.g., in well-covered bins, there is no reason to expect any material loss for a considerable period. It has been shown that petroleum ether, while giving a smaller total weight of extracted matter than other solvents does extract the whole of the poison. This was confirmed, but it was found that extracts which had been allowed to stand for some time were less toxic than one tested shortly after extraction. In addition to experiments with aphides, a limited number of experiments were carried out with lepidopterous larvæ. Four species were tested with extracts of Swiss flowers grown at Harpenden, and it was found that each species had different powers of resistance to the toxic properties of the extract. This difference of susceptibility has been previously noted. In a single experiment with cabbage moth larvæ there was no evidence that pyrethrum extract had any action as a stomach poison or as a repellent to these insects.

British Copper Sulphate

It is satisfactory to note that in consequence of a considerable expansion in the world consumption of copper sulphate within more recent years, there has been a steady recovery in the export markets by the British industry. It may be recalled that after the entire cessation of the export restriction within the armistice period, British makers then found to their chagrin that the bulk of their large foreign customers in southern Europe and round the Mediterranean had been lost. This became inevitable, especially in France, Italy and Spain, as these countries were compelled to develop their own production due to the British export prohibition over a long period. In the year 1914 the total British exports were roughly 70,000 tons, and prior to that year the returns even exceeded well over 80,000 tons per annum, as will be seen from the following figures for the past ten years:

OFFICIAL U.K. EXPORTS

Tons				Tons			
1912	...	...	84,101	1924	...	...	40,005
1913	...	...	75,633	1925	...	...	40,791
1921	...	...	27,997	1926	...	...	37,821
1922	...	...	41,763	1927	...	...	42,401
1923	...	...	40,247	1928	...	...	47,857

The figures for 1914 already referred to of about 70,000 tons were not much affected, as the war broke out early in August, when the market was between seasons and export requirements had already been provided for. It will be seen that the figures for 1921 were very small, while by that time production in Italy and France had grown to a notable extent and British manufacturers became confronted with severe competition, which, with increased working costs and price-cutting, resulted in a

very poor margin of profit. Strenuous efforts had, indeed, to be made in recovering some of the lost ground, which met with fair success in the following four years, with exports reaching each year over 40,000 tons, or but little more than 50 per cent. of the pre-war average. There was a slight setback in 1926, but the returns for the last two years were the best shown since the industry was freed from war restrictions. In order to combat foreign competition it will be remembered that the British Sulphate of Copper Association, consisting of all the larger makers, was formed some years ago. This co-ordination of interests and a certain reduction of overhead charges no doubt largely assisted the industry. There are now but few makers outside the Association, and the export price is well under the control of a management committee. Fluctuations in the f.o.b. price during recent years have been small, at a fairly low level, as copper was comparatively cheap until towards last autumn, when, under a phenomenally increased world-consumption, the aspect of the market entirely changed, and the price rose to a higher level than seen since the year 1920, when it collapsed from £122 5s. to £70. In the first half of that year copper sulphate was selling up to about £48 per ton f.o.b., and dropped to £37 10s. incidental to a large accumulation of stocks being pressed for sale, but the price recovered to about £43 by the end of that year. Since then much lower figures have been recorded, partly due to the sharp fall in the metal and partly on account of increased competition in the export markets. Of late years fluctuations in value of sulphate have not followed those in the metal to anything like the same extent as under normal pre-war conditions, when foreign consuming centres were so much dependent on the British market. We give below the closing prices of standard rough bar copper and that of copper sulphate for the last three years, with the latest quotations, per ton:—

	Standard rough bars, prompt delivery	Copper sulphate, f.o.b., less 5%
1926	£56 3s. 9d.	£24
1927	£60 15s.	£24 10s.
1928	£74 10s.	£27 5s.
1929 (January 24) ...	£75 15s.	£27 15s.

It will, therefore, be seen that, whereas the metal since the close of 1926 has been raised by as much as £19 10s. per ton, the appreciation shown in the value of copper sulphate does not even represent £4 per ton instead of what would probably have been approximately over £6 per ton under pre-war conditions. Italy's production in the past year was raised to fully 100,000 tons per annum, which is more than double the pre-war dimensions, and that country already a few years ago became the leading world producer, whereas the U.K. output amounts to roughly 55,000 tons, against over 90,000 tons before the war. The French industry now ranks second, producing approximately 70,000 tons, judging from domestic needs (which up to the full normal would absorb 100,000 tons) and the quantities imported into and exported from France. During the war period America exported heavy quantities, but her exports since have been relatively small. The following are the Italian figures (metric tons) for a number of years:—

	Production	Imports	Exports
1924	89,500	4,908	2,869
1925	85,190	9,635	6,502
1926	92,924	8,238	8,086
1927 (estimated) ...	100,000	12,800	10,826

Domestic production would more than cover home needs and leave a notable exportable surplus, but there is always a demand in Italy for sulphate in large crystals, which is not made locally and calls thus for imports from abroad, chiefly England. It is estimated that about 75 per cent. of the total world output is required for the spraying of grape vines.

Machine-Made Lemon Oil

MACHINE-MADE lemon oil, as mentioned in a previous issue of our Trade Report, is being produced in increasing quantities in Sicily. In view of recent developments the position becomes more and more interesting, and it is about time that consumers realised some of the facts concerning the situation. The machine in general use was invented by a man named Cannavo, and consists essentially of a hollow cylinder with a central rod from which iron spikes protrude. The fruits are packed into this and the surfaces bruised and scraped by the rotation of the central rod. To free the spikes from the gratings a current of water is kept flowing through the machine and all the loose matter is thus washed down. This water, containing the pulp and oil, is then placed in separators and the oil drawn off. The surplus water dissolves out from 0.8 to 1 per cent. of the citral, and so-called "Cannavo" machine-made oil is therefore deficient in citral content. The oil itself contains an excess of extraneous matter, as is shown by the residue obtained by evaporation, machine-made oil yielding from 4 to 9 per cent. residue, against the 2.5 per cent. obtained from the hand-pressed product. Oil made by this process is also darker, the colour being generally green rather than pale yellow. On this account attempts at mixing the machine-made with a genuine sponge oil are unsuccessful, as the addition of only 5 per cent. is enough to darken the hue sufficiently to make detection possible. Producers were, however, not to be outdone by this obstacle, as by distillation the citral and the terpenes can be removed, leaving the colouring matter in the residue. These terpenes and the citral, being water white, are then added to a sponge oil, and so find a market. It is a well-known fact that quantities of citral from lemongrass oil are imported by exporters of lemon oil, and it is therefore easy to imagine how the deficiency in citral is overcome. The present position is most interesting, as there is such a shortage of genuine hand-pressed oil at the source that any parcels coming on the market are immediately snapped up. The short crop, aggravated by comparatively small losses during the recent Mount Etna eruption, has created this scarcity, and makers of the "Cannavo" oil have therefore had difficulty in disposing of the terpenes and citral obtained by distillation. It must be remembered that lemon terpenes are a waste product of the preparation of terpeneless oil of lemon and that these, too, are used as regular adulterants of sponge oil. Under these circumstances brokers on this side have been approached regarding the possibility of finding a market for the machine-made oil, as such, and offers are abundant at figures ranging from 1s. to 2s. per lb. less than sponge oil. It is for the ultimate consumer to say whether or not this article will become a regular market commodity, but buyers in valuing the product should remember that the deficiency in citral represents from 20 to 25 per cent. of the actual content. Few people have any faith in rising prices at Messina, but this season the general abstention of buying has had no weakening effect on the market up to the present, and the future, therefore, seems fraught with possibilities.

Westminster Wisdom

Notes on Parliamentary Matters

WIRELESS RECEIVING LICENCES

Viscount Wolmer informed Colonel Woodcock, on January 24, that the number of wireless receiving licences in force on December 31, 1926, was 2,178,430; the number on December 31, 1927, was 2,395,106; and the number on December 31, 1928, was approximately 2,628,000.

POISONS AND PHARMACY ACTS

Sir A. Holbrook asked the Home Secretary on January 24 whether the Committee on the Poisons and Pharmacy Acts has concluded its sittings; and, if so, when the Report is likely to be published?

Sir W. Joynson-Hicks: The Committee has not yet concluded its sittings and no indication can be given as to the probable date of submission of its Report.

Research on Spray Liquids

It has hitherto been considered that tar distillate sprays could not be made satisfactorily on a small scale, but as the result of recent investigations this opinion is likely to be revised. Sprays of this nature for use on fruit trees when the buds are dormant are often referred to as "winter washes," but again, provided advantage is taken of the latest research, they can be used at other periods of the year. It will be recalled that tar distillate spray fluids were introduced into this country from Holland in 1921, and an examination of the product showed it to contain 80-90 per cent. of a tar distillate, the remainder of the mixture consisting of resin soap and water. The tar distillate boiled at about 190°-360° C. and contained about 10 per cent. of its weight of tar acids. In 1925 an investigation regarding proper emulsification of these tar acids was undertaken by L. E. Smith, and following his research it was considered desirable to investigate more fully the egg-killing properties of certain products obtained from the tar distillate. According to F. Tutin ("Annual Report of the Long Ashton Research Station, 1927"), the material employed for the greater part of this work was a vertical retort tar boiling from 190° to 360° C., and which contained nearly 20 per cent. of "tar acids." The "tar acids" were separated into four fractions, boiling respectively from about 190°-220°, 220°-250°, 250°-280°, 280°-360°. The two intermediate fractions were relatively small and not further employed. The fraction boiling at 190°-220° is referred to subsequently as "low phenols"; that boiling from 280°-360° as the "high phenols." Five emulsions were then prepared with the aid of castor oil soap, as follows:—(I) An emulsion of the total distillate (this product is comparable to the tar distillate spray fluids at present in use); (II) an emulsion of the "low neutral"; (III) an emulsion of the "high neutral"; (IV) an emulsion of the "low neutral" plus 20 per cent. of low phenols; (V) an emulsion of the "high neutral" plus 20 per cent. of the "high phenols." These emulsions were employed in concentrations of 5 per cent. and 8 per cent. against eggs of the small winter moth, the results being summarised in the following table:—

Strength	Emulsion I		Emulsion II		Emulsion III		Emulsion IV		Emulsion V	
	5%	8%	5%	8%	5%	8%	5%	8%	5%	8%
Percent- age hatch	2.9	1.5	3.2	0.4	0.0	0.0	13.9	1.9	0.3	0.0

This clearly demonstrates the superior egg-killing powers of the emulsions (III) and (V), and the two outstanding conclusions which may be drawn are that the portion of the tar distillate boiling above 280° C. is more toxic to eggs than is the material of lower boiling point or the total distillate; and that the addition of phenols ("tar acids") to the neutral materials actually lowers the toxicity of the product. The most satisfactory material is, therefore, the liquid neutral constituents boiling between 280° and 360° C. This product is also less injurious to plants than spray liquids which contain "tar acids."

MAKING AN EMULSION

The high-boiling neutral material cannot be emulsified satisfactorily by means of any soap, but perfect emulsions can be made by means of Agral W.B. or Agral A.X. The most convenient method of preparing such an emulsion may be illustrated by the following example: First mix the high neutral distillate with 10 per cent. of its volume of Agral W.B. (or Agral A.X.). To half a gallon of this mixture add 9.5 gallons of water, followed by about 5½ oz. of caustic soda, and stir well. The resulting emulsion appears to be stable for an indefinite period, even when exposed to air. It is prefer-

able first to dissolve the alkali in a little water. An equivalent quantity of washing soda may be used. It is evident, therefore, that chemists will find no difficulty in thus preparing a standard wash of proved efficiency. It is only necessary to purchase from one of the large gas companies a high neutral tar distillate and proceed as has been described. The employment of the high neutral in place of the total distillate should not necessarily add to the cost, since the commercially valuable portion is the tar acids (cresols), and this material will all be recovered.

EFFECT OF "HARDNESS" OF WATER

A point of interest, particularly to chemists in the Eastern counties, concerns the fact that when using an excessively hard water the proportion of Agral W.B. and alkali must be increased in relation to the amount of water used. The concentration of free alkali in the finished emulsion, however, is much lower than that represented by the amount added, since the greater part is neutralised by the Agral, the latter compound partaking of the nature of an acid. It is known that tar acids are very damaging to plants, and as it has been demonstrated that their presence is not desirable from an egg-killing point of view, an investigation was made as to whether the new emulsion was less toxic to the plant than one made with the entire distillate. Growing branches of a plum tree were therefore sprayed about the beginning of July with a 2 per cent. emulsion of tar distillate made with the aid of castor oil soap and with a 2 per cent. emulsion of high neutral material made with Agral W.B. The former caused such damage that all the leaves died, while no visible damage was caused by the latter. Similar results regarding toxicity were obtained in a series of experiments.

PREPARATION OF OTHER SPRAY LIQUIDS

Certain oil sprays may with advantage be used to replace nicotine as cheap contact washes for spring and summer use against aphides, caterpillars, etc. (Staniland, "Long Ashton Research Station Report," 1926). Rape oil appeared to be the most suitable oil investigated, but difficulty was experienced in preparing it in the form of a satisfactory emulsion. It has now been ascertained that by the employment of Agral W.B. and Agral A.X. exactly in the manner described in connection with the high neutral tar oil a perfectly stable and satisfactory rape oil emulsion may be prepared. This method of emulsifying rape oil or other fatty oil has the advantage that the alkali need not be added until the spray is required for use, thereby avoiding saponification of the oil taking place, as would be the case were a stock emulsion prepared containing one of the usual alkaline emulsifying agents. It has also been found that, apparently, any neutral liquid which is immiscible with water may be quickly emulsified by means of Agral W.B. By this means stable emulsions have been made of a variety of fatty oils, paraffin, nitro-benzene, chloroform, carbon tetrachloride and carbon disulphide, etc. Very good emulsions of rape oil may also be prepared by mixing the oil with a half per cent. solution of Agral I to which a very small amount of alkali has been added. Alternatively, the Agral I, together with a trace of water, may be dissolved in the rape oil. This mixture will then give a good emulsion when shaken with water which has been rendered fairly alkaline. Agral I is a synthetic product, and has "wetting" powers much exceeding those of any known soap. The exceptional wetting powers of Agral I suggested that it might with advantage be employed in connection with spray liquids for treating objects which are difficult to wet thoroughly, such as mildews and woolly aphids. Trials were therefore conducted against the last-mentioned pest with a nicotine solution of the usual strength to which half per cent. of Agral I had been added in place of soap. The results showed that the nicotine-Agral I spray was decidedly superior to a nicotine-soap spray.

Foes of the Rose and their Control

THERE can be comparatively few flower gardens in this country where roses are not grown, yet from spring to autumn the plants need continual attention if they are to be free from attacks by insects and disease. The latter may be caused by a variety of agencies, which may conveniently be divided into two groups: (1) Those due to conditions of growth; (2) those due to parasitic organisms. When planting the bushes it is, therefore, important to select a suitable variety, but attention must be given to the application of proper fertilisers and the needs in respect of water, light and air. Every rose-grower is interested in the subject of manures for feeding his trees, but it may be pointed out that no one should expect to grow roses successfully by artificials alone—the soil must first have its texture put in a proper state of efficiency. There is, of course, a good demand (which can easily be increased) for fertilisers, but it is the diseases due to the parasitic organisms and the eradication of insect pests which offer the greatest scope for the chemist, and notes on the control of those which appear most commonly in the home garden, in the nursery, or in the greenhouse will be found in the following paragraphs:—

MILDEW AND BLACK SPOT

Powdery mildew is rarely absent from any rose garden or greenhouse during the summer. It develops very suddenly, and nearly all types of roses are susceptible, particularly Crimson Rambler and Dorothy Perkins. The disease manifests itself on the leaves as a powdery whitish coating, which is made up of chains of small colourless spores, by means of which the fungus reproduces. It is rare that mildew causes the death of the plant attacked, but it hinders development, and is disfiguring. There is also a form of mildew known as downy mildew, which sometimes troubles rose growers. Treatment is the same as for mildew, but it is more difficult to eradicate. Black spot is almost as common as mildew, and some roses, such as Ophelia, are extremely susceptible to it. The disease is aptly named, and the organism producing it lives within the leaf tissue. In the case of out of door roses it has been found that measures which are successful in controlling the one disease are also effective against the other. Such measures include improvement in growth conditions, sanitation (collection of diseased leaves), and treatment with fungicides. In regard to the last-named, the one which is the most practical, especially in home gardens, is a dust mixture consisting of 9 parts of powdered sulphur to 1 of lead arsenate. The sulphur which gives the best results is not the flowers, but the finely ground. The mixture is easily applied by means of powder bellows, and does not discolour the foliage to any appreciable extent. The arsenate of lead is efficient in controlling leaf-chewing insects, though its particular value in this instance is that it tends to prevent lumping of the sulphur and to increase the adhesive properties of the mixture. If nicotine sulphate is added many sucking insects also may be controlled. The dusting should obviously be done when the air is comparatively calm and the leaves dry. The application of the dust should be made as soon as the leaves begin to develop, and be repeated at intervals of ten to fourteen days. Sprays, such as Bordeaux mixture and ammoniacal copper carbonate are also effective in controlling the diseases, but the former has the disadvantage of discolouring the foliage. In regard to greenhouse, over-watering should be avoided, and when the disease occurs all affected leaves should be immediately burned. A common method of controlling these diseases in greenhouses is to vaporise sulphur, which then condenses on the leaves and acts as a fungicide. Care must be taken to prevent ignition of the sulphur since sulphur dioxide seriously injures the foliage. The vessel containing the sulphur can either be placed on a sandbath over an oil stove, or the heating pipes can be painted with a paste composed of equal parts of sulphur and lime mixed with water.

RUST

Rust of roses is characterised by the appearance of small orange-coloured pustules, from which the disease gets its name. An important step in the control is to destroy the infected portions so as to prevent the spread of the disease. As a supplementary measure a spray, such as Bordeaux mixture, can be used. This may be prepared as follows:—

Copper sulphate	...	...	4 lb.
Quicklime (lump form)	...	...	4 lb.
Water	...	...	50 gall.

The copper should be dissolved in 4 gall. of water in a wooden vessel and the lime slaked in another vessel. The lime is then diluted to 46 gall. and the copper solution slowly poured in. It should be used as soon as possible after mixing.

Applications of this spray may be made at intervals of two weeks during the growing season; but, as mentioned above, it stains the foliage. Incidentally, it may be mentioned that it was due to this property that it came to be used in the first place. When rust first appears the sulphur-arsenate of lead dust may be used to advantage, but if the disease becomes severe destruction of all affected bushes appears to be the only method of preventing the spread of the trouble.

LEAF SPOT

This disease (also known as leaf scorch) is rarely very serious. It is caused by a number of different fungi, all of which produce the same symptoms—small yellowish-green dots, which increase in size, become brown, and usually have a purplish border. In some cases the diseased tissue falls out, giving the leaves a shot-hole appearance. As in the case of the diseases already described, all affected leaves should be collected and destroyed by burning, and the sulphur-arsenate of lead dust or potassium sulphide spray should be used during the growing season. Spraying the trees in winter with a copper sulphate solution would kill the winter form of the fungi.

CANKER

This is characterised by a shrinkage of the bark, which spreads until it gets all round the stem, when the part above dies. All shrinkage and knotty excrescence should be cut away and burned. Sprays are of little value. Special attention should be given to pruning and to the resulting cut surfaces. The latter should be given a coating of paint or shellac, or, alternatively, the wounds can be dressed with Bordeaux mixture or solution or iron sulphate (2 oz. to 1 gall.), after which a protective poultice should be applied. Since the spores of the fungus may easily be carried from one bush to another on pruning shears, it is advisable to disinfect the shears each time after using them, by dipping in a solution of formalin prepared by mixing 1 oz. of formaldehyde (40 per cent.) with 2 gallons of water.

INSECT PESTS

Of all the enemies of the rose, aphids or green fly is pre-eminent for destructiveness; in fact, this, caterpillars, and two fungus diseases (mildew and black spot) are generally the only ones which give growers of the national flower any serious trouble. There are actually some forty species of insects which attack the rose (and about a dozen different fungi), notably, leaf-hoppers, frog-hoppers (cuckoo-spit), scale insects, thrips, red spider and gall-fly (moss-like growths on the leaves and stems). In the case of caterpillars of moths and false caterpillars of sawflies hand-picking is the only satisfactory way of keeping a check on their activities, but for the other pests mentioned remedial measures in the form of sprays and dusts give good results. Spray fluids should always be sold in a concentrated form ready for use when diluted with water. Useful insecticides against (1) sucking insects are nicotine and soap,

quassia and soap, and paraffin emulsion; (2) biting insects are powdered hellebore (1 oz. to 2 or 3 gallons of water), lead arsenate, or the sulphur and lead arsenate dust. The following are formulas for making spraying fluids for use against insects:—

Nicotine and Soap

Nicotine (98 per cent.)	... 3 to 1 oz.
Soft soap	... 1 to 1 lb.
Water	... 10 gall.

This is the Ministry of Agriculture formula, but of late derris has largely replaced nicotine as a contact insecticide, being cheaper and less poisonous. Some nicotine-soap sprays also tend to decrease in nicotine content on storage.

Paraffin and Naphthalene

Soft soap	... 56 lb.
Naphthalene	... 6 lb.
Paraffin	... 2 gall.
Water	... 2 gall.

For use dilute 1 to 1½ part with 100 parts of water.

Commercial paraffin emulsions, for dilution 1 in 10, generally contain 85 per cent. of paraffin, with 4 per cent. cresylic acid.

Quassia and Soap

Quassia	... 12 oz.
Soft soap	... 3-1 lb.
Water	... 10 gall.

The quassia should be soaked for twenty-four hours, or it may be boiled.

With regard to green fly, it will be found that where this pest abounds the rosebushes are often infested with ants, the reason being that the latter insects "milk" the former, in fact, "farm" them generally, so that it is advisable to take measures to control both. The quassia and paraffin sprays are quite effective against the green fly. As to the ants, the difficulties in the way of exterminating this pest are that any chemical likely to be effective when applied to the soil is harmful to plants, while unless a large area can be cleared the beds will be invaded by another colony from a neighbour's garden. Among the best ways of reducing their numbers is by means of traps, such as a sponge soaked in thin treacle and plunged into boiling water when covered with ants, or with the aid of poison baits, e.g., syrup

containing a little arsenic. Borax and calomel is supposed to be fatal to ants, but if the nests can be found a liberal dose of carbon disulphide, carbolic acid, or paraffin is salutary. There are one or two insects, such as leaf-cutting bee and raspberry weevil, which can only be controlled by trapping.

FERTILISERS

Roses require phosphate, as well as soil rich in organic matter, and lime put on in winter is sometimes needed. In preparing rose beds by trenching and digging manure into the lower level of the soil, basic slag should be added at the rate of 1 lb. to 2 lb. per square yard, and be well incorporated with the manure and soil of the lower spit. The surface of the rose bed should receive a winter dressing of basic slag at the same rate. In spring a dressing of ammonium sulphate (2-3 lb.) and superphosphate (8 lb.) per 40 square yards may be applied. If during the flowering period special stimulants are required potassium nitrate and potassium phosphate are quick-acting and effective. These chemicals can be used either as a top-dressing or as a liquid manure, preferably the latter, in which case 1 oz. of each should be dissolved in a gallon of water. The following are formulas for alternative preparations:—

I	
Superphosphate	... 57 parts
Fine bone meal	... 96 parts
Potassium sulphate	... 38 parts
Ammonium sulphate	... 28 parts
Ferric oxide	... 5 parts

To be applied in the spring. Dig round the roots of the bushes and work in a small quantity of the mixture. Repeat in five or six weeks time.

As a substitute for cow manure rape dust or fish guano can be supplied.

II	
Superphosphate	... ½ oz.
Ammonium sulphate	... ¼ oz.
Iron sulphate	... ¼ oz.
Water	... 2 gall.

Apply to the roots of the trees once a fortnight during April to August

Preserving Wood Against Dry-Rot

WOODWORK is subject to damage by beetles, known as worm, and by fungi, inducing dry-rot. Bacteria are not known to participate even to a minor degree. When dry-rot has been discovered, the first step to be taken is to determine which of the many kinds is present, and then to take the most economical action to eradicate it and prevent its recrudescence. An informative report which covers the subject very comprehensively and gives some excellent photographs of typical damage caused by various dry-rot fungi has lately been published by the Department of Scientific and Industrial Research ("Dry-Rot in Wood," Forest Products Research, Bulletin No. 1, H.M. Stationery Office, 1s. 6d.). Treatment of dry-rot depends in each case on the conditions prevailing, and the precise kind of preservative to be used varies with the situation of the wood to be protected. Some wood preservatives are excluded from use, at least inside a house, by reason of their scent. Such is the case with creosote, and even with certain other less aromatic preservatives whose slight odour is still sufficient to taint fat (of bacon or butter), other food substances, and even cigars. Again some preservatives are excluded from use by reason of the colour they impart. Among the wood preservatives advocated as providing adequate protection against dry-rot in houses, some are good, some indifferent, and others worthless. Confidence should not be placed in the following:—Blue or green vitriols, common salt and lime water, which represent a series of decreasing fungicidal power. Copper sulphate in particular also attacks iron, and in its commercial form in presence of iron can vigorously attack wood. Zinc chloride, sodium fluoride and magnesium silicofluoride (acid) in proper concentrations are more useful, but when too strong the first-named itself attacks wood,

while the much more fungicidal acid silicofluoride attacks iron and glass. Corrosive sublimate is highly poisonous, not only to the fungi in question but also to human beings, and has only slight powers of penetrating wood; yet under competent advice it may be used on occasion. It has one useful character, namely, that it is soluble in alcohol as well as in water. Opposed to these inorganic preservatives are organic ones, among which carbolic, acetic and salicylic acids, as well as formalin, may be excluded from use on account of their early evanescence. Valuable preservatives for use in houses are some that are mixtures of tar oils, especially coal-tar oils. Finally, in particular cases, mixtures of sodium fluoride and dinitrophenol or sodium dinitrophenate may be profitably used.

MAGNESIUM SILICOFLUORIDE

In cases where the use of a tar-oil preservative is undesirable, either from the point of view of colour, odour, or danger of damage to surrounding work, a 5 per cent. solution of acid magnesium silicofluoride may be used, which is colourless and will not have any harmful effect. But the heavier tar-oil preservatives are recommended for the treatment of all timbers whenever suitable, as they are likely to remain effective for a longer period than the silicofluoride. The magnesium silicofluoride to be used is not the pure salt but the acid commercial salt, which is a white solid containing free acid. The solution is made by dissolving ½ lb. of acid salt to one gallon of cold water. If desired it may be mixed with whitewash so long as it remains a 5 per cent. solution. It should be noted that this solution will attack metal and glass, and therefore should be mixed in a wooden tub; it has no adverse effect upon

wood, brick, stone, mortar or plaster. The solution should be applied to the surfaces to be sterilised by means of a brush, and every effort should be made to ensure its penetration into all the cavities and cracks. Very often, when decayed timbers are removed, bricks are found to be loose, and have to be taken out. They should be thoroughly cleaned of all dust and all mortar, and should be placed in a bucket of the silicofluoride, to soak for a short period before being relaid.

TAR OIL PRESERVATIVES

The properties, and consequently the specification, appropriate to a preservative that is composed of tar oils and is to be merely superficially washed or sprayed on to wood inside a house are different from those demanded by a preservative for use out-of-doors. The first property required by a preservative for outdoor use is that it shall be a powerful and durable preservative, but for indoor use an indispensable characteristic is that it shall not render a house or room uninhabitable by reason of its odour. It must therefore be free from naphthalene, evil-smelling sulphur compounds and thin oils containing a considerable percentage of the light-oils of lower boiling points are unsuitable because they adhere neither to the brush nor wood; moreover, they have a low ignition point so that, although the light oils penetrate more rapidly, this advantage is lost because it is not safe or economic to heat the preservative to a temperature sufficiently high to aid materially the penetration into the wood; also the light oils evaporate or change rapidly and their toxic efficiency is short-lived. One authority prescribes as a good preservative filtered anthracene oils 70 per cent., green oil (obtained from the distillation of pitch) 20 per cent., wood tar (devoid of water) 10 per cent. Others prescribe a mixture of tar oils having a specific gravity of 1.10-1.12; distillation not beginning below 230° C. or boiling not beginning below 200° C. Another preservative found to be effective is a heavy tar oil with volatile distillates of the character of heavy solvent naphtha. When 100 mil. of this are taken at 38° C. the distillation should conform to:—Specific gravity at 60° F., 1.054; specific gravity at 100° F., 1.037; distillation up to 205° C., 1 per cent. by volume; distillation up to 230° C., 15 per cent. by volume; distillation up to 315° C., 50 per cent. by volume; distillation up to 380° C., 87 per cent. by volume; residue, non-volatile, at 315° C., 51 grams; tar acids, 7 per cent. by volume; tar bases, 1.9 per cent. by volume; naphthalene and other picrate forming hydrocarbons, 12.2 per cent. by volume; water, trace; matter, insoluble in benzene ("carbon"), 0.20 per cent. by weight. This specification contains a percentage of naphthalene, but the odour disappears after a short time, and this class of preservative is considered to be eminently suitable for indoor work. It is not practicable to lay down any one prescription as the right one; conditions vary and a considerable range of mixtures may be effected. The limits of variation within which oils, the products of coal tar distillation (free of petroleum oils, but allowed to contain other toxic oils and salts) have been found in practice to be efficient out of doors when tested under the drastic conditions prevailing in the tropics, may be indicated as follows:—(1) The specific gravity shall not be less than 1.015 and not more than 1.07 at 38° C.; (2) the amount of tar acids shall be not less than 5 per cent. or more than 12 per cent. by volume; (3) the amount of water in the creosote shall not be more than 3 per cent.; (4) the amount of matter insoluble in benzol shall not exceed 0.4 per cent. by weight; (5) when 100 mil. measured at 38° C. of the dry creosote are distilled from a 250 mil. Wurtz flask, with an outlet from the neck approximately 6 cm. from its base, and the distillation completed in about 20 minutes, there shall distil at 760 mm. pressure—up to 205° C. from 0 to 7 per cent.; up to 230° C. from 10 to 40 per cent.; up to 315° C. from 45 to 78 per cent.; (6) the material shall be completely liquid on being slowly warmed to 38° C. with stirring, and on cooling down shall remain completely liquid after standing for two hours at 32° C. The heavier tar oil preservatives have certain marked characteristics:—(a) They usually possess a strong pungent smell, and when such a preservative is used on

the interior woodwork of a building this smell may persist for weeks, or even months; (b) they are usually dark, brown in colour, and therefore stain all woodwork; (c) it is not possible to apply oil paint over some preservatives of this type, as the preservative may "bleed" through and discolour, if not destroy, the paint; (d) oils possess considerable penetrative powers and will "creep" along the cracks or fissures of timber for considerable distances; (e) if the timber near a plaster ceiling or a plastered wall be treated, the oils will creep into the plaster and cause discoloration (to prevent this, it is advisable to protect all adjoining surfaces with sheets of paper, or water-proofing cloth); (f) when these preservatives are used at moderately high temperatures, fumes are given off and sometimes cause a sense of discomfort in the eyes of the workmen; there is no permanent effect, however. Heavy tar oil preservatives are highly inflammable, and whilst heating them every precaution should be taken against fire.

APPLICATION OF PRESERVATIVES

The method of application of the preservative to wood (or other materials) varies with the degree of protection desired and the need for economy. The simplest and cheapest method is to apply one, or preferably two, coatings to the surface by means of either a brush or a spray. In order to ensure deeper penetration, suitable preservatives should be applied hot (for instance, those derived from heavy coal tar oils at temperatures between 140° and 160° F.). Some of the silicofluorides, however, easily dissociate when heated and therefore must be applied cold. The weak points in mere superficial application of the preservative are that this penetration of the wood takes place only to a slight depth, with the consequence that, through cracks caused by shrinkage or by other means, patches of wood not reached by the preservative are laid bare and the way is opened for infection, while those preservatives soluble in water are liable to be washed out by rain, running or dripping water. When using preservatives on timber certain general measures are necessary in order to ensure as much penetration as possible:—(1) Before treating old unattacked timbers which are to be retained, it is important that all dust and dirt should be removed; (2) timber to be treated with tar-oil preservatives should be in an air-dry condition; (3) in surface treatments, two coats of the preservative should be applied, whenever possible by means of a brush, and each coat should be thoroughly worked into the surface fibres and cracks in the timber. Deeper penetration can be obtained by employing these preservatives in a heated condition at temperatures between 140° F. and 160° F. The penetration of the preservative into existing timbers is assisted by boring auger holes across the grain at convenient intervals; particularly, close to the ends from which any defective timber may have been removed. These holes should be filled with the preservative liquid and temporarily plugged. When the liquid has soaked away, the process should be repeated, and the holes permanently filled with wood plugs. This method is especially suitable for dealing with thick timbers, which cannot be removed, and which have had decayed portions cut from them. New timber and any old timber which can be easily removed for treatment should, if practicable, be immersed horizontally in a bath of the preservative, maintained at a temperature of 140° F. to 160° F. for, say, at least 30 minutes.

PAINT

The part played by paint on external woodwork is not quite simple. Properly brushed on to appropriately seasoned wood, it serves to hinder the ingress of water, prevents spores from reaching the bare wood, and decreases the liability of the wood to crack through shrinkage. But when the paint is applied to inadequately seasoned wood, it may do more harm than good; for the paint blisters, patches of wood are soon laid bare, and the wood may split as it dries and shrinks. The result is that spores, alighting on bare patches or falling into damp cracks, may germinate and find available to them wood which has been kept relatively moist by the coating of paint, so that decay may be more rapid than if the wood had not been painted.

British Trade in Fertilisers

THE following figures show the imports into and exports from the United Kingdom during the years 1926, 1927 and 1928. With regard to last year, as in most cases, details of the quantities, origin and destination are not at present available, only the totals and values of imports and exports can be given. Where neither total nor value is shown, no figures for the product *per se* are yet issued.

Imports BASIC SLAG

From	1926	1927	1928
	Tons	Tons	Tons
Netherlands	9,570	7,437	—
Belgium	36,120	59,436	—
France	2,321	11,733	—
Other foreign countries ..	—	453	—
Total from foreign countries	48,011	79,059	—
Value £	123,520	194,693	—
Total from British countries	200	287	—
Value £	846	1,043	—
Total	48,211	79,346	67,710
Value £	124,366	195,736	163,642

CALCIUM CYANAMIDE

From	1926	1927	1928
	Cwt.	Cwt.	Cwt.
Sweden	—	30	—
Norway	1,118	9,107	—
United States	—	—	—
Other foreign countries ..	1,960	4,154	—
Total from foreign countries	3,078	13,291	—
Value £	1,590	5,511	—
Total from British countries (Canada)	—	400	—
Value £	—	180	—
Total	3,078	13,691	—
Value £	1,590	5,691	—

GUANO

(Manufactured and compounds, including bone meal, and other manufactured fertilisers)

From	1926	1927	1928
	Tons	Tons	Tons
Latvia	—	126	—
Norway	369	618	—
Denmark	115	413	—
Germany	2,776	2,019	—
Netherlands	3,282	5,623	—
Belgium	7,768	9,352	—
France	1,183	2,460	—
Greece	—	1,491	—
United States	1	70	—
Peru	—	—	—
Brazil	248	721	—
Uruguay	—	—	—
Argentine Republic ..	1,917	1,129	—
Other foreign countries ..	352	106	—
Total from foreign countries	18,011	24,128	—
Value £	121,063	151,758	—
Irish Free State	2,103	2,250	—
British India	2,644	2,336	—
Falkland Isles	1,326	77	—
Other British countries ..	604	596	—
Total from British countries	6,687	5,259	—
Value £	50,785	40,263	—
Total	24,698	29,387	—
Value £	171,848	192,021	—

Imports—cont.

KAINITE, ETC.

From	1926	1927	1928
	Cwt.	Cwt.	Cwt.
Poland	—	55,202	—
Germany	1,411,774	1,376,628	—
Netherlands	25,102	23,472	—
Belgium	487,392	774,525	—
France	445,524	240,130	—
Other foreign countries ..	520	140	—
Total from foreign countries	2,370,312	2,470,097	—
Value £	293,265	315,663	—
Total from British countries	565	260	—
Value £	136	39	—
Total	2,370,877	2,470,357	—
Value £	293,401	315,702	—

SODIUM NITRATE

From	1926	1927	1928
	Cwt.	Cwt.	Cwt.
Norway	22,723	33,156	—
Germany	24,815	66,501	—
Netherlands	11,450	8,680	—
Belgium	111,162	122,817	—
France	39,335	8,240	—
Peru	9,400	—	—
Chile	569,207	1,330,204	—
Other foreign countries ..	400	1,113	—
Total from foreign countries	788,492	1,570,711	—
Value £	490,893	945,022	—
Total from British countries	537	90	—
Value £	285	70	—
Total	789,029	1,570,801	1,552,589
Value £	491,178	945,092	831,930

SUPERPHOSPHATES

From	1926	1927	1928
	Tons	Tons	Tons
Netherlands	24,399	45,602	—
Belgium	69,293	84,154	—
France	39,780	35,317	—
Other foreign countries ..	903	1,082	—
Total from foreign countries	134,375	166,155	—
Value £	351,100	409,643	—
Total from British countries (Irish Free State) ..	1,536	1,225	—
Value £	6,691	4,397	—
Total	135,911	167,380	127,216
Value £	357,791	414,040	306,204

Exports

AMMONIUM SULPHATE

To	1926	1927	1928
	Tons	Tons	Tons
Spain and Canaries ..	37,908	87,190	98,407
Italy	2,760	4,433	4,243
Dutch East Indies ..	19,839	9,497	25,750
Japan	39,517	85,379	112,725
British West India Islands and British Guiana ..	5,630	7,031	12,250
Other countries	55,899	71,795	140,047
Total	161,553	265,325	393,422
Value £	1,939,831	2,713,719	3,858,846

Exports—cont.

BASIC SLAG

To	1926	1927	1928
	Tons	Tons	Tons
Total to foreign countries	4,180	4	—
Value £	7,962	28	—
Irish Free State	2,954	2,252	—
New Zealand	11,434	10,366	—
Other British countries ..	873	1,173	—
Total to British countries ..	15,261	13,791	—
Value £	47,926	38,499	—
Total	19,441	13,795	22,292
Value £	55,888	38,527	45,906

GUANO

(Manufactured and compounds, including bone meal, and other manufactured fertilisers)

To	1926	1927	1928
	Tons	Tons	Tons
Germany	9,046	12,920	—
Netherlands	2,391	1,745	—
Belgium	4,997	3,929	—
France	1,851	1,709	—
Portuguese East Africa ..	1,058	1,559	—
Japan	5,693	850	—
United States	18,867	22,208	—
Other foreign countries ..	2,903	3,563	—
Total to foreign countries	46,806	48,483	—
Value £	383,289	412,157	—
Irish Free State	3,374	3,635	—
Channel Islands	7,235	7,710	—
South Africa	3,276	2,985	—
Canada	87	1,247	—
British West India Islands	3,024	3,856	—
Other British countries ..	3,767	3,867	—
Total to British countries	20,763	23,300	—
Value £	162,381	178,062	—
Total	67,569	71,783	67,853
Value £	545,670	590,219	511,174

SODIUM NITRATE

To	1926	1927	1928
	Cwt.	Cwt.	Cwt.
Total to foreign countries	2,153	154	—
Value £	1,415	152	—
Total to British countries	4,900	4,081	—
Value £	3,368	2,498	—
Total	7,053	4,235	—
Value £	4,783	2,650	—

SUPERPHOSPHATES

To	1926	1927	1928
	Tons	Tons	Tons
Total to foreign countries	1,832	864	—
Value £	8,562	5,223	—
Irish Free State	7,723	5,992	—
South Africa	1,707	1,890	—
Other British countries ..	631	736	—
Total to British countries	10,061	8,618	—
Value £	52,652	39,761	—
Total	11,893	9,482	12,621
Value £	61,214	44,984	51,348

Cannabis Indica and the D.D.A.

THE placing of Indian hemp and its preparations under the schedule of the Dangerous Drugs Act by the International Opium Convention of 1925 is another additional step taken by the authorities to place further obstacles in the way of legitimate trading. A more ridiculous action on the part of the authorities (writes a correspondent) it would be difficult to find, as amongst drugs, Indian hemp may safely be regarded as of very minor importance, especially if one is to rely solely on the annual amount of imports and exports. Indian hemp, for the official purposes of the Home Office, comprises Bombay tops (cannabis indica) and the African cannabis indica or guaza, as well as the less known varieties, such as Mozambique roll, or Marmagosa tops, from Marmagosa, Portuguese India. Practically all these varieties are imported from India and South Africa, and it can be definitely stated that the value of the imports of all varieties last year did not amount to £5,000. Yet, with the impost of these new regulations or restrictions, every importer, exporter, dealer, and manufacturing chemist, in fact, everybody dealing or handling the raw drug, is compelled by the new regulations to pay the sum of £5 annually to the Home Office for a licence. We have little doubt that the intention of the authorities is ultimately to even kill all legitimate trading in the drug, as in addition to the fee of £5, importers cannot bring in fresh supplies except under special import license, and similar procedure is necessary for an exporter. Every possible difficulty is being put in the way of the recognised trader, and as the Home Office is apparently the pivotal centre regulating supplies, as well as imports and exports, it will rest entirely with the British authorities as to whether permission is given to the trader to execute an order outside this country. This means that a purchaser abroad would, in the first place, have to obtain from his own Government a certificate to import, and then be subject to the grace or indulgence of the British Home Office.

In the course of a great number of years we do not recollect more than two or three isolated instances where persons have been known to take this drug for illegal purposes—in fact, outside the drug trade it is practically unknown in this country. In India and South Africa, where, no doubt, a certain amount of illicit traffic has been going on amongst the native population, stringent regulations have been in operation for many years past. Some few years ago—towards the end of 1923—the Union Government of South Africa prohibited the cultivation of the drug, known by the natives as "dagga," and ordered the farmers to destroy all plants. Furthermore, all existing stocks had to be either exported or destroyed within a certain period, and any person failing to carry out these instructions was liable to heavy terms of imprisonment. In India, the Bombay Government have for a number of years placed an increasing duty on its exportation—the present duty alone amounts to between 24s. to 25s. per lb. Yet some thirty years ago the genuine Bombay tops were sold in the public drug auction at 3d. per lb. It can now be taken as definite that the offerings of cannabis indica in the drug auctions held on November 29, 1928, were the last, and that all further lots can only be offered or dealt with privately through the recognised channels. The extortionate fee of £5 charged by the Home Office has naturally driven most of the merchants who regularly handled the drug out of trading, as it is realised that with the small quantities ordered by consumers nowadays, it would not pay them to take out a licence. It will therefore mean that in many cases where an importer, broker, dealer and exporter are concerned in the fulfilment of a solitary transaction, the Home Office, in order to carry out their force, £20 is netted in license fees. The drug trade now awaits with a certain amount of interest and irritation the nature of the next drug to be banned by the International Opium Convention, and whether in the near future "inspection licences" will be necessary, for the already harassed trader to view goods or samples placed on view at the drug auctions.

NIGERIAN GINGER.—In view of the favourable report received from the Imperial Institute on samples of ginger from Southern Zaria every effort is being made to increase production. Instead of a few cwt., the crop this year will amount to from 120 to 150 tons.

Insurance Act Dispensing

Record of matters concerning Chemists' interests in the National Health Insurance Acts

Local Reports

ENGLAND AND WALES

Blackburn.—At the meeting of the Insurance Committee on January 10, the clerk said that a nurse attending an insured patient added an item to an Insurance prescription on her own account, without the authority of the practitioner, and it was found that neither the practitioner nor the chemist knew that it was an addition. Dr. R. Y. Aitken, M.D., moved that the matter be brought to the notice of the person, and she be asked to desist from similar practices. Dr. F. J. Greeves, seconding, said that the item had probably been added with the best intention in the world and with the idea of helping the patient, but it was not competent for any person other than the doctor himself to add to a prescription. The Committee decided to take such action as would prevent a recurrence of the practice.

General Council of Panel Chemists (Scotland)

A meeting of the General Council of Panel Chemists (Scotland) was held at 36 York Place, Edinburgh, on January 23, Mr. A. A. Dick in the chair. It was reported that certain difficult adjustments created by the growing tendency for setting up convalescent homes, largely used by insured persons, and for local contracts in connection with electric power schemes, and such like, had been satisfactorily arranged. The only two points affecting pharmaceutical service were a regulation prohibiting the giving of a bonus by any panel chemist to persons presenting Insurance prescriptions and a provision under which a notification of any proposed alterations made to a body acting for chemists collectively would be regarded as sufficient notification to individual panel chemists. It was pointed out that under the provisional arrangement made by the Scottish Board of Health continuing Insurance Committees and relative Committees till May 31, 1929, the General Council of Panel Chemists (Scotland) would continue until the new Pharmaceutical Committees had been elected, and that thereafter there would be a re-election of the General Council.

Methylated Spirit in Prescriptions.—A question had been raised as to objection taken to the use of industrial methylated spirit in N.H.I. prescriptions for inhalations and mouth washes, it being held that only preparations for application to the skin came within the permission. A question had also been raised as to the granting of a rebate on absolute alcohol prescribed for inhalation with oxygen. The officials had objected to the granting of a rebate. The question had been submitted to the Commissioners of Customs and Excise, but as yet no reply had been received.

Testing of Drugs and Appliances.—It was pointed out that several years ago it had been agreed with the Scottish Board of Health that the testing scheme should be a joint one on the part of each Insurance Committee acting with each Pharmaceutical Committee. The delay in putting the agreed scheme into operation was due to there being no power to ask a panel practitioner to write a prescription for the purposes of the test, and to the officials of the Food and Drugs Department being unwilling in some cases to carry out the procedure. Under the new regulations panel practitioners were required as part of their contract to write such prescriptions as might be required, and Insurance Committees had power to appoint their own inspectors. The point as to a joint scheme had apparently been overlooked in some areas with the result that there was some little confusion. In other areas the scheme had been carried out in accordance with the agreed plan, and on the whole was working quite satisfactorily. It was pointed out that the Manchester Chamber of Commerce Testing Department, in the case of appliances, had apparently assumed that the rule as to sealed packages which existed in England applied also to Scotland, but this had been put right. It was agreed that a communication should be sent to Insurance Committees.

Open Shops on Holidays and Sundays.—Ayr County Pharmaceutical Committee brought up the matter of a proposal by the Insurance Committee that in every town it should be arranged that one shop would be open on half-holidays and on Sundays. It was agreed to adhere to the position hitherto maintained on this matter, namely, that the arrangements for pharmaceutical service which amply met the needs of the general community were quite sufficient to meet the needs of the insured population. It was pointed out that every medical practitioner usually carried such medicinal remedies as might be called for in an emergency.

Cost of Bottles and Delivery of Medicines.—From Aberdeenshire there was submitted a communication pointing out the loss incurred by panel chemists in the non-recovery of the price of bottles and of the cost of delivering N.H.I. medicines. Prescriptions were left at the pharmacy by the doctor to be despatched to rural areas at a considerable distance, and it was frequently found that the price of bottles and the carriage of the medicine could not be recovered from the insured person. It was explained that the matter was one that had been frequently raised, but the Board of Health had always refused to entertain any proposal to make these bottles or deliveries a charge on the drug fund. In some areas the Insurance Committee had issued an instruction to all insured persons that no medicines would be dispensed unless the insured person sent or called for the medicine, lodging the money for the bottle or otherwise paying for the bottle and paying the cost of delivery.

Luminal and Renaglandin Gauze.—Prescriptions for Luminal had been passed for payment on the ground that no proprietary chemical equivalent was listed in the wholesale lists. The position had been changed, and now phenobarbital and phenobarbital sodium were listed in the British Drug Houses' list. Care should be taken to have the drug prescribed under its recognised public name. Renaglandin gauze was necessarily disallowed because it was not included in the Schedule of Prescribed Appliances. It had been suggested that there was injustice to the panel chemist who dispensed Luminal according to the hitherto prevailing practice, and that the Central Checking Bureau should notify panel chemists before any such change was made. It was explained, however, that the method of the Central Checking Bureau was quite in order, and that any practical difficulty that might arise was one to be settled by Insurance Committees, which had power to see that no injustice was done.

Statistics.—The number of prescription-forms of all kinds for Scotland in 1927 was 2,748,779, being 11.273 less than for the previous year. The value of the forms (exclusive of the cost of insulin) was £151,739 0s. 9½d., being a decrease of £3,220 1s. 5½d. compared with the previous year. This was the third successive year in which there had been a decrease in the total amount. The average price per form was 13.24d., showing a decrease of nearly 0.25d. This was also the third successive year in which there had been a decrease in the price per form. The cost of insulin had now reached £19,161 18s. 11½d., not including insulin supplied direct by the Scottish Board of Health to insured persons in respect of whom practitioners dispense their own prescriptions.

Proposed Local Formulary.—There had been proposed a local formulary which, it was said, was designed to conserve the drug fund by lessening the cost of medicines. The principle of such a formulary had been strongly objected to by the Board of Health, by medical practitioners and by pharmacists, as well as by Insurance Committees in Scotland. Such a development was strongly deprecated as conveying the impression that one style of dispensing was to be adopted in the case of insured persons and a different style in the case of private persons. It had been proved also by experience that such an expedient, instead of reducing the cost, had the result of encouraging a wasteful use of medicines. The objectionable practice of panel practitioners writing prescriptions otherwise than on the proper official form had recently been complained of. There were many serious objections to this laxity. It ought to be insisted upon that the official form should in all cases be used.

Trade Report

The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers receive the goods into stock, after which much expense may be incurred in garbling, packing, etc. Qualities of chemicals, drugs, essential and fixed oils, and many other commodities vary greatly, and higher prices than those here quoted are charged for selected qualities of natural products even in bulk quantities.

42 Cannon Street, E.C.4, January 31

BUSINESS in the pharmaceutical group of chemicals continues fairly good but on a limited scale as regards quantities, there being few changes. Citric acid has a firmer tone, and tartaric acid is very steady. Aspirin is in brisk demand and current prices are willingly paid; vanillin is still subject to keen foreign competition. Sodium salicylate is very steady and in good demand. Crude drugs are mostly unchanged. Matto Grosso ipecacuanha, however, is still tending upwards; serena is steady and in seasonable demand. Cod-liver oil is weak, with the market waiting fishing developments; gentian is scarce andorris very firm. Business in essential oils is still dull, but star anise, Sicilian lemon and Paraguay petitgrain have firmed up. Both American natural tin and Japanese dementholised peppermints are a shade easier, while rosewood is cheaper. Conditions among industrial chemicals continue steady with a fair amount of business. Sal ammoniac and ammon. chlor. are firmer. Acetone is firm and active. There are no price changes of importance among the coal tar products. Among the fixed oils, about the only change of note is a decline in turpentine. Linseed is steady and unchanged and palm is about level on balance. Lubricating oils are dearer; fuel oils and petroleum are cheaper, likewise petroleum jellies.

Higher	Firmer	Easier	Lower
Ginger (W. Afr. c.i.f.)	Ammon. chlor.	Peppermint	Fuel oils
Ipecacuanha	Anise oil	Petroleum oils	Petroleum
(Matto Grosso)	Antimony	Petroleum oils	Jellies
Lubricating oils	(Ch. reg.)	Pimento (spot)	Platinum
Rubber	Lemon oil	Resin	Rosewood oil
	Petitgrain oil		Turpentine
	Sal ammoniac		
	Shellac		

Crude Drugs, etc.

AGAR AGAR is quiet, with Kobe No. 1 strip offered at 4s 3d. per lb. on the spot, and to arrive, 3s. 10½d. c.i.f. is quoted.

ANTIMONY has been rather steadier under indications of an improved demand, but prices show only little alteration; for Chinese regulus on the spot, ranging from £37 15s. to £33 is quoted. C.i.f. terms for shipment, £34. English refined varies from £54 to £55.

BAYBERRY BARK is firm at 7½d. per lb. c.i.f.

BELLADONNA ROOT.—Hungarian (0.63 per cent. alkaloid) is quoted at 53s. per cwt. c.i.f. to arrive.

CADMIUM is fairly steady at about 4s. 3d. per lb. for spot, and there is a moderately active demand also for forward parcels at about 2d. less. A small parcel has lately come in from Russia.

CAMPHOR (REFINED).—Japanese is steady at 2s. 3d. per lb. on the spot for slabs, and for January-March shipment 2s. 2d. c.i.f. is quoted; ¼-oz. tablets are quoted at 2s. 11d. spot.

CANNABIS INDICA.—The stocks of African are now much reduced on spot, and for a limited quantity 4s. per lb. is wanted. Bombay tops are also in limited supply and the price is a matter of negotiation. We draw attention to an article on p. 140.

CLOVES.—Zanzibar are steady, with spot sales at 1s. 5½d. to 1s. 5½d. per lb.; to arrive, sellers quote December-February shipment at 1s. 5½d. per lb. c.i.f., which figure has been paid. The landings of Zanzibar in London during the week ending January 26 were 100 and the deliveries 110, leaving a stock of 1,942 (figures corrected), against 11,783 in 1928 and 7,268 in 1927. The landings of Madagascar during the week ending January 26 were nil and the deliveries 82, leaving a stock of 2,533.

COCOA butter is firm at 1s. 5d. per lb for CFR and prime English 1s. 3½d. to 1s. 4½d. per lb. in not less than one-ton lots.

COD-LIVER OIL remains unchanged. The new fishing season has not yet commenced, although several speculative offers have been received for new oil. The nominal price

for finest Lofoten non-freezing medicinal oil is 130s. per barrel c.i.f., with several shippers offering at slightly less.

BERGEN, January 28.—The price has again been reduced. Non-freezing steam-refined quality is officially quoted at 130s. per barrel c.i.f. London. The official inspection of the cod fishery at Lofoten begins to-day. The auspices are favourable.

CORN PRODUCTS, ETC.—Guaranteed water-white American glucose (corn syrup) is 22s. 6d. per cwt. for January-March delivery, ex store London. Dutch maize starch powder (cornflour) is 16s. 3d. per cwt. on the spot. American is 16s. 9d. per cwt., ex store London, for January-March delivery. Pearl starch is 16s. 3d. for January-March, ex store, London. Dutch maize starch crystals is 21s. 6d. on the spot, and American is 19s. 6d. ex store, London, for January-March delivery. Dutch dextrin is quoted at 22s. to 26s. per cwt. on the spot as to quality. American canary for January-March delivery is 19s. 4½d. and white for January-March delivery is 19s. 1½d., ex store, London. Dutch farina is quoted at 14s. 6d. per cwt. on the spot, and to arrive 13s. 6d. per cwt. f.o.b. is wanted.

DIGITALIS LEAVES are quoted at 145s. per cwt. c.i.f.

ELM BARK in bundles is quoted at 1s. 5d. c.i.f., slabs at 1s. 2½d. c.i.f., and grinding quality at 11½d. per lb. c.i.f.

ERGOT.—An arrival of 100 packages has taken place from Russia. Sound Russian on the spot is quoted at 1s. 2d. and at 1s. 1½d. c.i.f.; new crop Spanish is 2s. 5d. c.i.f. and 2s. 6d. spot.

GALLS.—Chinese are quiet, with plum-shaped offering to arrive at 55s. 6d. per cwt., and ordinary shaped at 52s. 6d. c.i.f.

GENTIAN.—The intensive competition from which this drug has suffered for a lengthy period has resulted in the elimination of many importers and in consequence there now appears to be a scarcity, with a limited quantity offering at 35s. per cwt.

GINGER.—West African has been sold up to 51s. 6d. per cwt. c.i.f. New York, and 52s. c.i.f. is quoted. Spot value is 52s.

GUM ACACIA.—Kordofan sorts offer at 44s. per cwt. on the spot, and at 40s. c.i.f. for January-February shipment; cleaned is 46s. spot and 41s. 6d. c.i.f. for January-February shipment.

HENBANE LEAVES are quoted at 49s. 6d. per cwt. c.i.f. to arrive for new crop.

IPECACUANHA.—The lowest price of Matto Grosso is now 12s. 6d. per lb., up to 14s. being quoted by one importer. The "Highland Warrior" has brought 39 bales from Monte Video.

KAMALA.—The "City of Canterbury" has brought 15 bags from Karachi to Liverpool.

LEPTANDRA ROOT.—The "Huronian" from New York has brought 106 packages; they are probably for direct consumption. Sellers quote 10d. per lb. on the spot.

LYCOPodium.—Russian treble-sifted in cases is quoted at 2s. 8d. per lb. c.i.f.

MAGNESIUM.—A steady business is being done by home makers at from 3s. 3d. to 3s. 9d. per lb. for sticks and small ingots. Wire is from 7s. 6d. to 12s. 6d., and ribbon 11s. to 14s. per lb.

MENTHOL is quiet at 23s. per lb. for Kobayashi-Suzuki on the spot, and for January-March shipment undeclared, 20s. 6d. c.i.f. is quoted.

MERCURY is unaltered, with no indication of any pressing offers, although the home trade demand has continued restricted at the high prices. Some fair lots were reported disposed of in the latter part of last week and since, and importers' and dealers' quotations stand at £22 2s. 6d. to £22 5s. per bottle, less the usual discount. The Far Eastern markets have been inquiring for further parcels, and a fair business has been done in that direction. The f.o.b. selling price of the Italo-Spanish Combine remains at £21 15s.

OPUM valued at £3,250 from Turkey, and £3,600 from British India, has been entered by the Port of London Authority.

In the January issue of the journal of the "British Chamber of Commerce of Turkey" it is stated that "prices ruled very steady all through December, even though the demand was not as large as in November, the sales amounting to 190 cases, against 234 in the previous month. The prospects for the near future, however, are not encouraging as new restrictions are being enforced on the Continent which will probably mean "less business." Stocks in Constantinople are estimated at about 1,500 cases.

ORRIS.—Florentine remains nominal on the spot in the absence of adequate supplies, and to arrive up to 105s. per cwt. c.i.f. is quoted. The new crop is due August-September.

PEPPER has been steady and rather easier forward. Fair black Singapore closes at 1s. 5½d. per lb. on the spot, and January-March shipment at 1s. 4½d. c.i.f. Lampong is 1s. 5½d. spot; afloat has been sold at 1s. 4½d. and January-March at 1s. 4½d. to 1s. 4½d. c.i.f. Tellicherry for January-March shipment is higher at 146s. c.i.f. Alleppy for January-March shipment is 144s. c.i.f. White Muntok is

steady at 2s. 3d. spot, while to arrive the sales include January-March 2s. 2½d. to 2s. 2d., and March-May at 2s. 2½d. to 2s. 2½d. c.i.f., with sellers on Wednesday at 2s. 2½d.

PIMENTO is quiet at 1s. 0½d. per lb. on the spot, and for January-February shipment sellers quote 115s. per cwt. c.i.f.

PLATINUM.—There has been a further decline, the leading home refiners having dropped their selling limit to £13 17s. 6d. per oz., and outside offers are reported at around £13 10s. to £13 12s. 6d. A little more interest is being shown at the reduced terms. The South African output for November was reported at 60 tons of platinum concentrates, besides 1,728 oz. raw platinum.

PODOPHYLLUM ROOT.—*P. Emodi* is quoted at 60s. per cwt. on the spot and *P. Pellatum* at 70s. The "City of Canterbury" has brought 272 bags *P. Emodi* from Karachi to Liverpool.

RUBBER is slightly dearer on the week. At one time, towards the latter part of last week, spot rose to 11½d. per lb., but at the close declined to 10½d. Whilst there is a fair amount of activity both for spot and forward rubber, the nervous feeling still exists, and the market is likely to be subject to varied fluctuations over the next few weeks. Stocks continue to accumulate, and last week arrivals totalled 2,110 tons, whilst deliveries were 1,234 tons, showing a further increase of 876 tons on the week. The London stock now stands at 24,423 tons, against 66,285 tons at the corresponding period last year. Quotations (Wednesday, 5 p.m.): No. 1 standard ribbed smoked sheet spot and February, 10½d.; March, 10½d.; April-June, 10½d.; July-September, 11½d. per lb.

SEEDS.—The position is unchanged and remains very dull, with little alteration in prices. ANISE.—Spanish is 62s. 6d. and Russian 27s. per cwt. CANARY remains very quiet; Mazagan is 19s. 6d. spot and Saffi 19s. on the spot. CARAWAY.—Dutch remains at 36s. per cwt. c.i.f. for prompt shipment and 36s. 3d. for January-March shipment. CUMIN.—Maltese is 54s. spot and 45s. c.i.f. for forward shipment. MOROCCO is 45s. spot and 44s. c.i.f. forward. CORIANDER.—Morocco is 17s. 6d. spot and 16s. 3d. per cwt. c.i.f. is quoted for forward shipment. FENUGREEK.—Morocco is 18s. spot and 17s. c.i.f. forward. HEMP.—Manchurian is 20s. and Chilian 21s. 3d. spot. LINSEED.—Mazagan is 19s. 6d. spot and 18s. 9d. c.i.f. is quoted for forward shipment. FENNEL.—Indian is 68s. spot and 60s. c.i.f. is quoted forward.

SENEGA is steady and in fair demand, sellers quoting 5s. 3½d. to 5s. 4d. per lb.

SHELLAC.—The spot market closes rather firmer, usual standard TN orange offering at 192s. 6d. per cwt.; fine orange is 215s. to 320s.; pure button, 230s., and AC cakey 210s. To arrive TN for January-February shipment has been sold at 177s. 6d. to 181s. 6d. per cwt. c.i.f. For delivery the sales include March at 184s. to 182s. 6d. to 184s., and May at 180s. to 184s.

STRAMONIUM LEAVES are quoted at 60s. per cwt. c.i.f.

TARAXACUM.—German is quoted at 69s. and Russian at 58s. per cwt. c.i.f.

Essential Oils

MARKET conditions are still disappointing, though star anise, Sicilian lemon and Paraguay petitgrain are the turn better. Japanese dementholised and American natural peppermints are a shade weaker, while rosewood has touched a very low level. We have gone into the position of machine-made lemon oil, and interesting facts on this topic are disclosed in our editorial columns.

ANISE (STAR) is slightly firmer on the spot, and one holder refused 2s. 6d. per lb. for leads of "Red Ship." Shipment is quoted 2s. 1d. per lb. c.i.f. in drums and 2s. 3½d. c.i.f. in leads.

BAY is unchanged at 7s. 6d. per lb. on the spot for 50-55 per cent. West Indian.

BERGAMOT is unchanged at 20s. 6d. to 21s. per lb. c.i.f. for shipment and 21s. to 21s. 6d. on the spot for 37-38 per cent. l.a.

CAJUPUT is firm at 3s. 2d. per lb. on the spot.

CANANGA.—Java on the spot is worth 11s. 6d. to 12s. per lb.

CASSIA is unchanged at 5s. 3d. per lb. on the spot, and offers are now being made for shipment at 4s. 7d. c.i.f. for the 80-85 per cent. c.a., free from alcohol.

CITRONELLA is neglected at last week's values. Java is 2s. c.i.f. and 1s. 11d. per lb. on the spot. Ceylon is 1s. 7d. c.i.f. and 1s. 8½d. per lb. on the spot.

CLOVE.—Second hand parcels have now practically disappeared from the market. English distilled from first hands is quoted at 10s. 6d. per lb.

EUCALYPTUS has been in slightly better demand. Values are unchanged at 1s. 10d. to 2s. per lb. on the spot according to percentage of cineol.

GERANIUM is unchanged and neglected. Bourbon is quoted at 18s. 6d. per lb. on the spot and 18s. c.i.f. Algerian is nominal at 16s. 6d. per lb. on the spot.

GINGERGRASS is unchanged at 9s. 3d. per lb. on the spot.

JUNIPER BERRY is in poor demand at 5s. 9d. per lb. for B.P. (exot.) quality on the spot.

LAVENDER is unchanged at 15s. to 15s. 6d. per lb. on the spot according to quantity for 38-40 per cent. French oil.

LEMON is firmer. Hand-pressed Sicilian oil is now quoted at 14s. per lb. c.i.f. and the spot value is about 14s. 3d. for good brands. The question of the marketing of machine-made oil is the subject of an editorial comment on page 134.

LIME.—West Indian distilled is quoted at 30s. per lb. c.i.f., with the spot value at 29s. to 29s. 6d. per lb.

ORANGE.—Sweet Sicilian is worth about 19s. per lb. on the spot, while bitter is quoted at 18s. 6d. per lb. Second hand sweet oil is offered at 18s. 6d. per lb. on the spot.

PALMAROSA is offered on the spot at 12s. per lb. in one direction, though generally quoted higher than this.

PATCHOULI.—The best quality Singapore is quoted at 21s. per lb. on the spot, but other grades are variously priced down to 17s. 6d. per lb.

PEPPERMINT.—Values of Japanese dementholised have eased to 7s. to 7s. 3d. per lb. on the spot for Kobayashi-Suzuki. January-March shipment is quoted from 6s. 7½d. to 6s. 9d. per lb. c.i.f. American natural tin oil is inclined easier at 13s. 6d. to 13s. 10d. per lb. c.i.f., while on the spot the value is around 14s. per lb.

PETITGRAIN.—Paraguay is firmer for shipment at 7s. 6d. per lb. c.i.f., with the spot quotation at 7s. 6d. in quantities and 7s. 9d. for small lots.

PINE.—Needle oil is quoted at 1s. 11d. per lb. c.i.f. in drums.

ROSEWOOD (BOIS DE ROSE) is very weak and lower. Cayenne is now quoted at 7s. to 7s. 3d. per lb. on the spot, while Brazilian could be bought for 6s. per lb.

SPEARMINT is firm on the spot at 19s. to 19s. 6d. per lb., but can still be bought at 18s. c.i.f.

VETIVERT.—Bourbon is quoted at 19s. 6d. per lb. on the spot.

WORMSEED (CHENOPodium) is unchanged at 8s. 3d. per lb. c.i.f. and 9s. 6d. on the spot.

The following arrivals have taken place from the countries indicated during the period January 23 to January 29 (inclusive): Bergamot (It.), 5 cs.; camphor (Jp.), 15 cs.; caraway (Neth.), 2 dm.; cassia (Ch.), 20 cs.; cinnamon (Ger.), 2 cs.; citronella (Jv.), 6 dm.; juniper berry (Ger.), 2 cs.; lavender (Fr.), 11 cs. 3 dm.; lemon (It.) 50 cs.; (Ger.) 5 cs.; lemongrass (Fr.), 1 cs.; lime (B.W.I.), 15 cs.; orange (It.) 79 cs.; (B.W.I.) 25 cs.; patchouli (Sey.), 4 dm.; peppermint (Jp.) 154 cs.; (C.-Slov.) 9 cs.; pine (Ger.), 4 cs.; rose (Fr.), 1 cs.; sandalwood (Ger.), 1 cs.; vetivert (Réun.), 2 dm.; undescribed (Fr.), 24 cs.

Pharmaceutical Chemicals, etc.

BUSINESS continues fairly good on a limited scale. Tartaric acid is very steady, and citric acid is in brisk demand; a good business is being done in aspirin.

ACETANILIDE continues to be offered on spot at about 1s. 4½d. to 1s. 6d. per lb. for B.P. crystals and powder; business is slow.

AMIDOPYRIN is quiet and unchanged; dealers quote spot at 7s. 6d. to 7s. 9d. per lb.

ASPIRIN.—British is still in good demand, and 2s. 3d. to 2s. 6d. per lb. is being willingly paid. There is some foreign offered at about 2s. 1½d. to 2s. 2d.

BARBITONE is quiet, dealers quoting spot from 5s. 6d. to 5s. 9d. per lb.

BENZOIC ACID (B.P.) has been in good inquiry of late, and prices are inclined to harden a trifle; quantities, ex works, 2s. to 2s. 1d.; smaller parcels, 2s. 2d. to 2s. 3d. per lb., ex store.

BENZONAPHTHOL shows no change, with dealers offering on spot at 2s. 10d. per lb. for five-kilo lots.

BROMIDES continue unchanged, with the volume of business moderate; dealers quote: ammonium, 1s. 11d.; potassium, B.P. crystals, 1s. 7½d.; granular, 1s. 7½d.; sodium, B.P., 1s. 10d. per lb., for quantities in cases, ex store. British makers' list prices are unchanged; ammonium, 2s. to 2s. 3d.; potassium, B.P., 1s. 8½d. to 1s. 11½d.; sodium, B.P., 1s. 11d. to 2s. 2d. per lb., as to quantity. The "Julius Hugo Stinnes" from New York has brought 220 cases potassium, 60 cases ammonium, and 40 cases sodium bromide.

CALCIUM LACTATE is steady and, if anything, tending to harden a little; quantities from 1s. 2½d. to 1s. 2½d.; smaller lots, 1s. 3d. per lb.

CHLORAL HYDRATE is steady but quiet; duty paid crystals, 3s. 1½d. to 3s. 3d. per lb., as to quantity.

CITRIC ACID.—There is a phenomenal demand for deliveries until the end of the year, and to-day's price for English citric acid is 2s. 1d. and 2s. 1½d. per lb., less 5 per cent. discount. As regards foreign, a new quotation at 2s. 0½d. per lb. c.i.f., subject to acceptance, has been received.

CREOSOTE (B.P.) is quiet but steady; spot is offered at 1s. 8d. per lb. for fair-sized quantities.

CREOSOTE CARBONATE is unchanged on a dull market; quoted from 5s. 10d. to 6s. per lb.

GUAIACOL CARBONATE continues quiet, at 4s. 6d. to 4s. 8d. per lb.

HEXAMINE is moving in the usual quantities, but the market is still spoilt by intensive competition; free running crystals, 1s. 11d. to 2s. 1d. per lb., as to quantity.

HYDROQUINONE is steady, with a fair amount of inquiry; quoted at the controlled prices of 3s. 7½d. to 4s. 6d. per lb., as to quantity.

LACTIC ACID (B.P.) is steady, and is meeting with some business; quoted from 1s. 6½d. to 1s. 10½d. per lb., as to quantity.

METHYL SALICYLATE (B.P.) shows a little more business moving; quoted from 1s. 4d. to 1s. 6d. per lb., as to quantity.

METHYL SULPHONAL remains quiet, with dealers offering on spot at about 8s. 9d. per lb.

PARAFORMALDEHYDE continues steady; business fair; 100 per cent. powder, 1s. 7d. per lb., for quantities in kegs; smaller parcels, about 1s. 8d.

PARALDEHYDE is quiet, at from 1s. 1d. to 1s. 3d. per lb., as to quantity and packing.

PHENACETIN is meeting with the usual demand on a competitive market; quoted from 2s. 3d. to 2s. 5d. per lb., as to quantity.

PHENAZONE is steady, and business has been fair; quoted from 3s. 7d. to 3s. 8d. per lb., as to quantity.

PHENOLPHTHALEIN.—There are signs that the second-hand parcels which were available have now been absorbed, and there is no material obtainable under the scheduled price of 5s. 11d. to 6s. 1½d., according to quantity.

POTASSIUM SULPHOGUAIACOLATE is steady, as quoted on spot at 3s. 6d. per lb.

POTASSIUM PERMANGANATE (B.P.) remains quiet; quantities in drums at 5½d.; smaller parcels, about 6d. per lb.

RESORCIN.—Business continues fairly good; quoted from 2s. 9d. to 2s. 11d. per lb., as to quantity.

SALICYLIC ACID (B.P.) is steady, as quoted at from 1s. 3d. to 1s. 6d. per lb., as to quantity.

SODIUM BENZOATE (B.P.) is unchanged on a slow market; quoted from 1s. 7½d. per lb., for quantities in two-cwt. barrels; smaller parcels, from 1s. 8d.

SODIUM SALICYLATE (B.P.) is very steady, and business continues on a good scale; crystals, 1s. 7d. to 1s. 8d.; powder, 1s. 6½d. to 1s. 7d. per lb., as to quantity.

SULPHONAL is quiet on spot, with offers at about 6s. 3d. to 6s. 6d. per lb.

TANNIC ACID is unchanged, with quantities of B.P. leviss at 2s. 10d. per lb.; smaller parcels, 2s. 11d. to 3s. per lb.

TARTARIC ACID.—The market is very steady, following constant rises in the price of raw material since last autumn, to-day's prices being 1s. 4½d. to 1s. 4½d. per lb., less 5 per cent. discount.

TERPIN HYDRATE remains quiet at 1s. 5d. to 1s. 6d. per lb. for quantities.

THYMOL is steady, but business is not of much account; quoted from 9s. 6d. per lb. for cwt. lots of synthetic fine white, and at 11s. 3d. per lb. for ex ajowan seed.

VANILLIN is steady, but business seems poor; 100 per cent. from cloves is about 17s. to 17s. 6d. per lb.; ex guaiacol, 14s. 9d. to 15s. 3d. per lb.; foreign competition is still very much in evidence.

Industrial Chemicals, etc.

London, January 30.

CONDITIONS in this section continue steady, and a fair amount of business is being done. Sal ammoniac is firmer on a short spot market. Other items are about unchanged.

ACETIC ACID is unchanged and fairly brisk; 80 per cent. technical, £36 15s.; 80 per cent. pure, £37 per ton, in barrels; glacial, pharmaceutical 99 to 100 per cent., £66, in glass demijohns; glacial, in barrels, £56 per ton, ex store.

ACETONE continues firm on an active and short-supplied market; B.G.S., 10-ton lots, £76 10s.; 5 ton lots, £78 10s.; 1 to 5-ton lots, £81; less than 1 ton, £85 per ton, in drums, ex store.

ALUM is steady, and business is moving on moderate lines; lump, £8 5s. per ton, in casks, ex store; slightly cheaper for quantities to come forward.

AMMONIUM CHLORIDE is firm and slightly dearer, with grey galvanising at £21 10s. per ton, in casks, ex store; slightly less for contracts.

ANHYDROUS AMMONIA is steady, with a fair inquiry; quantities from 10d. to 1s. per lb., in loaned cylinders, carriage paid; slightly less for big contracts.

ARSENIC.—There is a little demand for white Cornish, 99 per cent., which is quoted at £16 5s. f.o.r. mines, but

business is said to be possible at a little less. Mexican high grade is £17 to £17 5s. c.i.f. Liverpool.

BARIUM CHLORIDE is firm on spot, with 98 to 100 per cent. prime white crystals in short supply; quoted from £11 10s. per ton, in casks, ex store; forward, £9 10s. f.o.b. Continent in quantities.

BLEACHING POWDER is offered on a competitive market at about £6 12s. 6d. to £7 per ton, for 35 to 37 per cent. available chlorine, in casks.

CAUSTIC SODA continues to be quoted by home makers for home trade contracts at £13 12s. 6d. for 70 to 72 per cent. and £14 per ton for 76 to 77 per cent., in drums, carriage paid to buyer's station.

COPPER SULPHATE.—There is still a good demand, with a considerable business reported lately for export, and f.o.b. terms for casks are £27 10s. to £28 per ton, less 5 per cent.

CREAM OF TARTAR.—This market has not responded to the rise in the price of raw material. To-day's price is 94s. to 95s. per cwt., less 2½ per cent. discount; demand is quiet.

FORMALDEHYDE is steady, with a fair amount of business moving; 40 per cent. by volume, £36 to £37 per ton, in casks, ex store.

FORMIC ACID is steady and in fair demand; 85 per cent. in carboys, £46 to £46 12s. 6d. per ton, ex store.

ISOPROPYL ALCOHOL has been receiving fair inquiry at the unchanged rates of from 11s. to 12s. per gallon, in drums, ex store.

LITHOPONE is quiet, with 30 per cent. Continental red seal at £19 10s. per ton, in casks, ex store.

OXALIC ACID is receiving fair inquiry at about £30 per ton; cwt. lots, 32s., ex store.

POTASH CAUSTIC is unchanged at Convention prices; business moderate; 88 to 92 per cent. solid, spot, less than 1 ton, £36 15s.; 1 to 5 tons, £35 5s.; 5 to 15 tons, £32 15s. per ton in drums, ex store; 30s. per ton less, c.i.f., in all cases.

POTASSIUM CARBONATE is steady, but business continues poor; 90 to 92 per cent., £25; 96 to 98 per cent., £26 per ton, in casks, ex store; slightly cheaper for contracts.

POTASSIUM CHLORATE remains dull; quantities to come forward, 2½d.; spot parcels, from 3d. to 3½d. per lb., ex store.

POTASSIUM PERMANGANATE remains very slow of sale; quantities of commercial quality, in 2-cwt. drums, 5½d. to 5½d. per lb., ex store.

POTASSIUM PRUSSATE is meeting with a fair demand; dealers quote yellow at £63 10s. to £65 10s. per ton; single casks, 7d.; small parcels, 7½d. per lb., ex store.

SAL AMMONIAC is dearer with spot supplies limited, while business continues quite good; dog-tooth crystals, £32; medium, £29 7s. 6d.; fine white crystals, £18 12s. 6d. per ton, in casks, ex store; slightly cheaper for contracts.

SALTCAKE remains slow; home trade, £2 12s. 6d. per ton, in bulk, delivered.

SODIUM ACETATE is firm on spot with supplies limited; quoted from £21 12s. 6d. per ton, in casks, ex store; slightly easier forward.

SODIUM HYPOSULPHITE continues steady and business is fairly good; dealers quote pea crystals in one-cwt. kegs at £15 to £15 2s. 6d.; commercial, £9 10s. per ton, in casks, ex store. British makers' price for pea crystals to home consumers on contract, £15 per ton, carriage paid to buyer's station.

SODIUM NITRITE is unchanged on a steady but quiet market; 100 per cent. basis, £19 17s. 6d. per ton and 20s. 6d. per cwt., docks, London.

SODIUM PRUSSATE is steady with a fair amount of business moving; quantities from 4½d. to 4½d.; smaller parcels, 5d. to 5½d. per lb.

COAL-TAR PRODUCTS, ETC.—There is again no change of importance to record, while business in most products is rather poor. ANILINE OIL continues steady at from 8d. per lb., packages extra, carriage paid. ANILINE SALT is unchanged at 8d. per lb., packages extra, carriage paid. BETANAPHTHOL continues to be quoted from 10d. per lb., carriage paid for quantities.—CARBOLIC ACID ICE CRYSTALS.—A good demand is well maintained and prices are firmly quoted at 6½d. per lb. for large quantities of 39° to 40° C. ice crystals for forward delivery. Crude carbolic 60's, 1s. 11d. per gallon, naked, at works. CREOSOTE OIL remains very quiet; ex works, 5½d.; f.o.b., 6½d. per gallon in bulk quantities. CRESYLIC ACID is in good inquiry, and although in plentiful supply, prices are well maintained. The pale is offered at 2s. 5d. per gallon; refined, 2s. 9d., and pure, 4s. per gallon, naked, at works. Smaller quantities would command premiums on these prices. NAPHTHALENE is easy as quoted on a quiet market; imported flakes and balls, £15 10s. per ton, in cases, ex wharf. METHYL ALCOHOL is very steady with the market continuing active; spot, £46 per ton, in drums, ex store, and cheaper forward in quantities. PYRIDINE is nominal on a slow market at 4s. 6d. per gallon, f.o.b. TOLUOL shows no change, with business limited. Com-

mercial 90's, 1s. 7d.; pure, 1s. 10d. per gallon at works. XYLOL remains dull; commercial, 1s. 7d.; pure, 1s. 10d. per gallon at works. PITCH shows no further decline in quoted values, but the market is still generally quiet; f.o.b. East Coast, 34s. per ton.

Fixed Oils, etc.

AMERICAN turpentine shows a big drop on the week. Linseed oil is about unchanged and closes steady but quiet. Palm oils are quiet, but values are unaltered. ACID OILS continue quiet but steady; coconut and/or palm kernel, 35s.; Groundnut, 31s.; soya, 28s. spot. CASTOR is unchanged and quiet; pharmaceutical, 49s.; first pressings, 44s.; second pressings, 41s., per cwt. in barrels, in not less than one-ton lots. COCONUT continues quiet; deodorised, spot, 46s.; Ceylon, 37s. 3d., c.i.f.; Cochin, 47s. 6d., c.i.f. COTTON is steady but quiet; deodorised, 40s.; common edible, 38s.; soapmaking, 35s.; crude, 32s. 6d., spot. GROUNDNUT remains slow; deodorised, spot, 48s. 6d.; crude Oriental, 40s., c.i.f. PALM KERNEL has remained dull; deodorised, about 44s.; crude, 39s. 3d., spot. PALM.—Business has been limited all the week; prices show some movement, but are about level on balance; Lagos, 38s. 9d.; softs, 38s. 9d.; mediums, 38s. 3d.; hard, 38s.; bleached, 41s. 3d., spot. RAPE is quiet but prices are maintained; refined, 46s. 6d.; crude, 42s. 9d., spot. SOYA continues quiet; deodorised, 41s.; crude, 35s. 6d., spot. LINSEED (raw, naked).—Business has been quiet, but prices for all positions are about maintained, and the market is fairly firm. On spot, 29s. 9d.; February, 28s. 7½d.; February-April, 28s. 4½d.; May-August, 28s. 10½d.; September-December, 29s. 3d. Boiled oil, spot, 32s. 9d. Hull, on spot, 23s. 3d.; February-April, 28s. 6d.; May-August, 28s. 9d.; September-December, 28s. 9d. TURPENTINE.—Spot delivery dropped to about 46s. 6d. per cwt., and February-April 47s. The London deliveries for last week were only 1,442 barrels, making a total of 6,483 barrels since January 1, as against 7,357 barrels for the same period last year. Including the landings and afloats, the visible supply amounted to 34,510 barrels, while the stocks totalled 32,150 barrels. A year ago the visible was 59,986 barrels, including stocks of 58,906 barrels. RESIN.—The market was inactive at easier rates despite declining stocks in America. C.i.f. terms for shipment from America were thus:—B/D, 17s. 6d. to 18s. 1½d.; F/G, 19s. 1½d.; H/I, 19s. 4½d.; K/M, 20s.; W.G., 23s., and W.W., 25s. 9d. Spot terms were 6d. per cwt. more. WOOD.—Hankow in barrels on spot is steady at 73s. 6d. per cwt.; market dull. OLIVE.—French B.P. is 6s. 6d.; edible, 7s. 3d. per gallon, ex wharf; Italian edible, 8s. 6d. per gallon.

LUBRICATING, MINERAL AND BURNING OILS, ETC.—Lubricating oils are dearer on a firm market. Fuel oils are cheaper, and petroleum oils are easier. Other items are unchanged, with a fair business passing. BENZOL continues in active demand, and is firm; 90's standard motor, 1s. 6d. per gallon, ex works, in tank wagons. Ex London works, 2d. per gallon more. FUEL OIL is slightly cheaper; 950 gravity, £3 7s. 6d.; 890 gravity, £4 per ton, ex tank; slightly cheaper forward. PARAFFIN WAX AND SCALE.—Wax is quiet but steady at 3d. to 5d. per lb., according to melting point, in bags; scale is quoted for shipment at the easier price of £23 17s. 6d. per ton, c.i.f. London. WHITE OILS continue in fair demand; special No. 1, £23 10s.; No. 1, £25; No. 3, half-white, £20 10s.; No. 4, half-white, £19 15s. per ton, drums and barrels free, ex wharf. SOLVENT NAPHTHAS have been quiet but are about steady; 90/160, 1s. 1d. to 1s. 2d.; heavy, 90/190, 1s. to 1s. 1d. per gallon, naked at works. PETROLEUM JELLIES are cheaper on a quiet market: white to snow white, £38 10s. to £47 10s.; amber and yellow, £17 15s. to £22; dark stiff green, £11 12s. 6d. per ton, barrels free, ex wharf. LUBRICATING OILS are dearer, and the market is steady; spot: pales, £10 to £22 10s.; reds, £11 5s. to £22; dark cylinders, £13 5s. to £33 10s.; filtered cylinders, £21 to £34 per ton, less 2½ per cent. SOLUBLE OIL AND CUTTING COMPOUNDS are steady at £20 to £28 per ton net. No. 1 RUSSIAN OIL is offering on spot at £14 per ton, less 2½ per cent., barrels free, ex wharf.

Synthetic Camphor

AN extraordinary general meeting of December 23 has authorised the Board of the Société Alsacienne de Produits Chimiques to increase their capital for the purpose of developing the manufacture of synthetic camphor. The synthetic camphor factories at Vaugouin produce, according to information given by the President of the Board during the discussion, 2½ tons per day at a net cost price regarded as satisfactory. It is the intention of the Société to double the capacity of production at their works so as to take an important place in the world markets and to assure adequate profits for the capital invested. The quality of camphor produced is said to be excellent and totally free from chlorine, often the cause of yellow discolorations after a lapse of time in some products.

Import and Export List

A NEW edition of the Import and Export List has been issued under the authority of the Treasury and the Customs and Excise, and is for use as from the beginning of the year until further notice, "for articles of merchandise imported into the United Kingdom or exported therefrom." The notes include trade names, country of consignment, re-exports, articles liable to key industry duty, articles liable to more than one kind of duty, hydro-carbon oil duty, etc. The List is published by the Stationery Office at 9d. net.

Chilean Beeswax

ACCORDING to the Chilean Government statistics for 1924 (the latest available), 243 tons of beeswax were exported from Chile in that year. Chile ranks among the principal countries supplying the United States with beeswax, and the quantities and values imported for the past several years are shown in the following table:—

Year	lb.	Value
1922	371,000	\$85,000
1923	249,000	63,000
1924	372,000	97,000
1925	186,000	71,000
1926	244,000	96,000
1927	219,000	84,000

Java Cinchona and Coca Exports

THE following table shows the total exports of cinchona and coca from Java during the first nine months of 1928, compared with the corresponding period of 1927 (amounts in kilos.) :—

	Cinchona		Coca	
	Jan.-Sept. 1927	Jan.-Sept. 1928	Jan.-Sept. 1927	Jan.-Sept. 1928
		kilos	kilos	kilos
British India	103,911	76,358	—	—
Germany	—	20,671	61,201	31,764
Great Britain	387,989	108,216	—	—
Italy	—	22,266	—	—
Japan	422,678	241,880	183,019	—
Netherlands	3,313,084	4,412,183	398,019	205,996
Port Timor	—	25	—	—
Russia in Europe	—	2,084	—	—
U.S.A.	—	—	—	21,780
Total	4,227,662	4,883,683	642,239	259,540

During the nine months (January-September) the exports of quinine from Java were 19,977 kilos., compared with 12,708 kilos. during the same period of 1927.

Paraguayan Petitgrain Oil

THE production of petitgrain oil is not an organised industry in Paraguay. No attempt has been made to centralise the distillation and small quantities are produced in scattered parts of the country. The principal Paraguayan buyers are located in Asuncion, where they secure stocks both through their representatives, who travel into the interior, and from the producers, who bring the product to Asuncion. No figures are compiled by the Paraguayan Government as to production, but the entire output is exported. The following table shows the exports for the period 1914-1925, inclusive:—

Year.	Kilos.	Year.	Kilos.	Year.	Kilos.
1914	26,159	1918	36,163	1922	56,188
1915	38,423	1919	37,976	1923	59,230
1916	46,235	1920	73,675	1924	73,358
1917	61,408	1921	57,541	1925	75,923

Figures of value are not available for years prior to 1926, but the quantity and value of exports for 1926, 1927 and the first quarter of 1928 were 90,176 kilos., valued at 297,580 gold pesos, 81,372 kilos., valued at 244,116 gold pesos, and 19,422 kilos., valued at 58,366 gold pesos, respectively. While Government figures do not show destination of exports, it is claimed that the bulk is sold to buyers in Argentina for re-export. Buyers in Asuncion report that no adulteration whatever is made of the product up to the time of export from Paraguay. As an indication of the price trend of oil of petitgrain, the following figures published by the Paraguayan Government are given for the years 1926 and 1927:—

Average monthly price (per kilo).

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1926	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.60	2.70	2.70
1927	2.35	2.22	2.10	2.20	2.20	2.50	3.00	3.00	3.00	3.00	3.00	3.00



Letters for this section should be written on one side of the paper only. Correspondents may adopt an assumed name for purposes of publication, but must in all cases furnish their real name and address to the Editor.

Stocktaking

SIR,—“Senex” (*C. & D.*, January 19, p. 78) must have been an extremely rapid worker to have been able to take a complete stock in one day, although of course it depends on the size of the business and the amount of the stock, and particularly the varied nature of the stock. After a good deal of experience, in the wholesale and the retail, I have found the best aid to simplifying the work of stocktaking as much as possible is to get everything well prepared in advance. Stock-sheets can be made out with the names of the articles in stock, and the wholesale prices filled in; sufficient stock can be brought into the shop to last for a day or two so that the shop can be taken on the first day, and the stock-rooms afterwards—this obviates the necessity of adjustments for sales; while parcels of goods delivered can be put on one side for the time being or the amounts taken from the invoices. If the stock-sheets are on the loose-leaf system and there is sufficient staff in the pharmacy, the assistants can be paired off and each pair given a definite stock to take, patents, drugs, photographic, etc., one calling out and the other entering, and similarly, when the stock is all taken, they can be given a certain number of sheets each to price out; an hour or so a day in the quiet time will soon see it finished, and the proprietor can check it over afterwards. This is the method to which I was accustomed in a wholesale warehouse, and it has proved equally adaptable now that I am a retail proprietor. I am afraid that it is unavoidable to prevent the “filching” of some of the assistants’ hours, but a little extra on the wage bill will not hurt the owner.—Faithfully yours,

STOCKIST (28/1).

Essences

SIR,—Regarding the use of isopropyl alcohol in the manufacture of essences which you discuss in your editorial article (*C. & D.*, January 19, p. 68) it seems a pity that there is not some official standard fixed for the more commonly used ones. Unfortunately the word “essence” has got into use among the public for more than one class of preparation, chiefly used for flavouring purposes, which in pharmaceutical nomenclature we do not term essences at all. Essence of peppermint is probably the one which is sold most freely by chemists, and is generally understood, or at any rate it was up to the time of the war, to mean spt. menth. pip., B.P.; in later days, owing to the high duty on spirit and the cost of ol. menth. pip., various modifications have been introduced in order to lower the price, although there is still a public who will pay the price for the genuine article when the position is explained to them. Then we have essence of lemon, for which we supply ol. limonis, but the public will never call it anything but essence. Perhaps now that the B.P. is undergoing revision the compilers will consider the question of adding the synonym “essence” to such things as spt. menth. pip., when it would be settled once for all.

Yours truly,

RECTIFIED (29/1).

Dated Goods

SIR,—I do not agree that we ought to expect to sustain a loss if we fail to clear stocks of dated goods in good time. If the retailer cannot get on without the manufacturers he can very well get on without some of them, whereas no manufacturer can get far without the help of the retail distributor; and in these days, when we have to keep half a dozen or more articles which really only differ in name and wrappers, it is impossible to have the same steady sale for every individual line. If, therefore, it is not such a difficult matter to keep track of the stock of ready sellers, we

are still obliged to keep a few items of the lines which do not move so quickly, and it is just these lines which constitute the nuisance. We may only turn over one or two a week, and the particular customer who purchases them decides to make a change; this means, say, two tins left, and it becomes an impossible proposition to keep on returning one or two tins for exchange; equally, the pharmacist should not be expected to bear the loss. If it comes to depending on the generosity of the manufacturer in these cases, I would sooner cease stocking the lines altogether.—Yours, etc.,

RITORNARE (28/1).

Sound and Fury

SIR,—It is peculiar how anything to do with drugs or dispensing seems to have a fascination for the writers of “scare” articles in the daily papers, and generally they appear to have very little knowledge of the real facts. Fatalities connected with motor-cars can reach hundreds in a year, railway accidents are the cause of long death rolls, gas explosions and other causes add more to the list; yet none of these things seems to incite the writers to the same extent that something in connection with drugs will, neither do they suggest the discontinuance of the use of cars or trains. The latest stir has been caused by the similarity of the 3 and 5 signs; yet these signs have been used for generations without any real difficulty, and if they are written properly there should be no trouble in distinguishing between them; the same arguments might apply equally to badly written 3’s, 5’s, or 8’s in ordinary figures, and much more so to the V’s and X’s of the Roman numerals when the strokes are not terminated in the proper place. I have seen prescriptions in which the 3 sign has been written with several curls, but I must say that I had considered this to be due more to the impatience and carelessness of the writer rather than to a deliberate intention to distinguish between the two signs; on the other hand, I have also seen these signs written almost as a straight line with only a faint curl at the tail, the only distinction between the two being that the one for the 3 was about twice the length of that for the 5. If prescribers could be trained initially to form the signs in the proper way there would be no difficulty; but anyone properly trained to read and dispense prescriptions is not likely to confuse liq. arsen. 5j. with 5j., or aq. ad 5xij. with 5xij., having regard to the rest of the script. Probably the only time that doubt arises is when a single article is ordered, such as ung. zinci. 3iv., but this is not a case in which any risk is attached to the patient. Another difficulty which arises sometimes is in the number of strokes in a Roman numeral; these may often run into one another and are frequently undotted.

Yours, etc.,

CURLY TAIL (29/1).

Troublesome Insurance Prescriptions

SIR,—In a recent advertisement of a pharmacy for sale I was amused to read as one of the inducements that the business was absolutely pestered with Insurance scripts, surely a very left-handed way of recommending a concern. What with the low fees, the discounting system, and the interference with more profitable work at the busy times of the day, I should consider such an influx of Insurance scripts as more of a liability than an asset, and, personally, if I were looking for a new business I should give such an advertisement no consideration at all. Although I am on the panel, I have never yet let that fact obscure the truth that it is my general trade which earns my living. I wonder what is the usual practice among pharmacists with regard to scripts inaccurately written or incomplete; do they communicate with the doctor themselves or hand the script back to the customer to take back for correction? In one day recently I received three scripts without signatures, two without quantities, two D.D.A.’s without dates, and one D.D.A. without the patient’s address, from various doctors. Although I have taken in a good many of such scripts at intervals, this constituted a record, and to have seen to them all personally would have meant spending the whole day interviewing doctors.—Yours, etc.,

INCOMPLETED (22/1).

Poor-Law Dispensers

SIR,—Poor-law dispensers, in common with other officers in the service, are greatly concerned with certain clauses of the Local Government Bill, 1928, which affects the position and superannuation rights of all grades of poor-law officers. It is apparent that these officers will, if the Bill passes in its present form, not have freedom of movement to appointments under other boards of guardians or councils without loss of existing superannuation rights. Again, if a dispenser is transferred to employment under a council, he must accept whatever superannuation scheme that council has in force in substitution for his present terms of service. Should the council to which he is transferred have no superannuation scheme, a transferred dispenser may lose his existing rights. Poor-law officers claim that any transferred officer should not be worse off than at present, and a conference of all organisations representing various branches of the service has been called to consider the position. This conference claims that all officials transferred should have the option of continuing subject to the provisions of the 1896 Act, under which they were engaged. Compensation for alteration of duties is not provided for, despite previous precedents. The whole matter is engaging the earnest attention of the conference, and poor-law dispensers are anxiously watching the course of events in the hope that amendments will be made to the clauses in the Bill, which will make the terms of service more just than at present promised.—Yours, etc.,

PHARMACIST (17/1).

Longevity of Chemists

SIR,—Is Mr. Metcalfe's suggestion (*C. & D.*, January 12, p. 53) that the longevity of chemists is due to "the atmosphere surrounding drugs" to be taken in a literal sense? Or does he mean the moral atmosphere? I would suggest the latter. Surely a chemist knows better than anyone how much (and sometimes how little) drugs can really effect. And is he not usually found by the general public an exceptionally good prescriber for minor ailments, and the best judge of when a doctor's intervention is really necessary? Surely all this makes for health and longevity. Inmate modesty and professional secrecy, together with the inexperience of exciting medical criticism, render the chemist unwilling to insist on these facts. But I, though the son of a chemist who lived to be eighty (in spite of the cruelly long hours of "the good old times," by which he had considerably suffered), am only, Yours, etc.,

A MERE LAYMAN (18/1.)

The Need of the Day

SIR,—For some months past, in your correspondence columns, there has been a periodical call for a leader in pharmacy, which culminated last week in the demand for a new association. London and Greater London have many local associations and branches of the Society and R.P.U., and there is a great deal of overlapping and apparently not much accomplished. It might be a great advantage to link up all these units in some way. A really live central body from the whole of London and its environments might be of considerable assistance to the powers that be. We have plenty of leaders; what is wanted is more unity among the rank and file of pharmacy. The R.P.U. and P.A.T.A. would both do better work if they could depend upon the active support of every member. The remedy for most of our troubles lies in our own hands. The longer matters are allowed to drift the more trouble it will be to put things right.

Yours faithfully,

W. E. GAZE.

Highams Park, E.4.

Pre-War Experiences

SIR,—“H. C. B.” in his “Pre-war Recollections” (*C. & D.*, January 5, p. 20), appears to have been more fortunate in his “cribs” than some of us were in those days. Take the hours he specifies: In addition to the regular 8 a.m. to 10 p.m. duty, my experience of Saturdays was that I never finished till Sunday morning, for after the day's work was done stocks had to be filled up for the Sunday duty, and that duty was taken

alternately and lasted all day. It is true that the door was not kept open, but the assistant whose turn it was had to remain in all day to answer the bell. Nor did I get an hour off daily; seaside berths in the season I found were worse still, as there were no regular hours for closing, these being regulated by the amount of work in or by the cessation of custom. Like “H. C. B.” I found that people expected to get served at any hour, and at one time I had a series of calls for unnecessary articles in the early hours. I discovered after a little while that a gang of bright young people had hit on it as a kind of sport to knock the chemist up on the way home; when this was realised, the prices went up on an increasing scale until the game was stopped. But I never discovered any customers who gave me invitations to their houses. Perhaps my experiences have been unfortunate; but I have always found that a chemist's assistant has no status in the eyes of customers, being in fact rather an object of mild depreciation than otherwise; and apart from this, my employers of those days would certainly not have looked favourably on their assistants hobnobbing with customers, they would probably have anticipated some ulterior designs on their trade or goodwill. We are, it is true, considerably removed from those days of late hours, and so far as assistants are concerned they are assured of their half-holiday each week; but there is still a loophole, for although the shop must be closed at 8 p.m. there is nothing to prevent an assistant working inside after that hour, neither is there any regulation regarding Sunday work. As for the employers (and I am speaking now for the small single-handed pharmacists who are still, I suppose, in the majority), there is nothing to prevent them working all the week round, and in many cases they have to do so if they wish to make their pharmacies going concerns. I have no doubt that there are many pharmacists who, like myself, have a permanent seven-day week.—Faithfully yours,

HORÆ LONGÆ (14/1).

Dispensing Notes and Difficulties

Solubility of Caffeine

SIR,—Can the undernoted prescription be dispensed as a presentable mixture? :—

Pot. iodid.	...	...	...	...	3j.
Pot. citras.	...	...	...	...	3j.
Liq. ammon. acet.	...	...	...	...	3℥ss.
Caffein citras.	...	...	...	...	3℥ss.
Spt. chlorof.	...	...	...	...	3℥ss.
Aq. menth. pip.	...	...	...	ad	3vij.

Yours faithfully,

INTERESTED (24/6).

[The amount of caffeine citrate in this mixture is close to the limit of solubility in the vehicle. If dissolved by the aid of heat in distilled water and the mixture completed, using a concentrated peppermint water, the presence of the other ingredients diminishes the solubility of the caffeine and in a few hours the bottle is filled with a mass of needle-shaped crystals. The difficulty disappears if twice the volume of vehicle is used and a clear stable mixture can be turned out.]

Ammonium Acetate and Iron Perchloride

SIR,—Could you tell me if there is any way of avoiding the chemical change which takes place when the following is compounded? :—

Liq. ammon. acet.	...	...	...	...	3ij.
Tr. ferri perchlor.	...	...	...	...	3ij.
Glycerini	...	...	...	...	3ij.
Aquam	...	...	...	ad	3vij.

Yours faithfully,

STUDENT (16/1).

[In this mixture the ammonium acetate and ferric chloride interact with formation of ammonium chloride and ferric acetate. The reaction is intentional, the object being to prepare a mixture containing ferric acetate. The mixture resembles the liquor ferri et ammonii acetatis (Basham's mixture) of the United States Pharmacopœia.]

Miscellaneous Inquiries

When samples are sent particulars should be supplied to us as to their origin, what they are, what they are used for, and how. We do not undertake to analyse and report upon proprietary articles nor to publish supposed formulas for them.

C. C. (25/81).—SUGARLESS MARMALADE.—See *C. & D.*, 1928, I, 294.

G. S. (29/11).—REMEDY FOR WORMS IN PUPPIES.—This is a thick viscid oil, which appears to be pure castor oil, since it responds satisfactorily to the B.P. petroleum ether test. It is coloured red, probably with red sanders-wood and smells agreeably but fairly strongly of spearmint oil. There is also a suggestion of thymol in the odour. In it is suspended a small amount of crystalline matter. This was not identified, but it might be santonin, which is soluble to the extent of one part in 200 of castor oil.

S. M. L. (8/18).—MANUFACTURE OF DOG BISCUITS.—So far as we are aware there is no book dealing with the manufacture of dog biscuits, but the following gives a general idea of the composition:—Most dog biscuits consist of waste portions of meat chopped, mixed with flour. They contain a good deal of firm fibrous tissue, and a large percentage of fat. Nutritive salts must be added, just as in the case of the meat flour made from the waste meat of extract factories. Wheat flour containing as little bran as possible may be used, being mixed with 15-16 per cent. of sweet, dry, chopped meat, and the dough well baked, but care should be taken to keep it light and porous. Salt, vegetables, chopped bones or bone meal, phosphate of lime and other salts can be added for their nutritive value.

W. H. M. (15/18).—COLOURING ALUM.—You do not mention the manner nor the form in which the chemical is to be used. If it is the powdered alum which it is desired to colour, and this is to be used, for example, by sprinkling around plants to protect them against slugs, an impure ferruginous earth, such as Armenian bole, would be suitable, or, alternatively, Prussian blue. These would be impracticable if the alum is to be dissolved or is supplied in the form of crystals, and under such circumstances it would be better to proceed on the methods used in connection with bath crystals, particulars of which will be found in the *C. & D.*, 1928, II, 302. A letter sent to the address on your notepaper has been returned.

E. C. F. (21/18).—DESTROYING MOLES.—The following are the methods used for ridding land of moles:—Pledgets of cotton-wool soaked in carbon disulphide are placed in the animals' runs and covered over with turf; earthworms soaked in strychnine are placed in the runs (moles prefer live food); calcium cyanide (*C. & D.*, 1928, I, 426); trapping with a horsehair noose.

R. S. M. (21/28).—FERTILISERS FROM STRAW.—A layer of the damp straw is sprinkled with calcium cyanamide, then covered with more straw and more cyanamide. A fair amount of time is required before the rotting is complete, but when this stage is reached phosphates and potash can be added in such quantities as may be considered desirable. The cyanamide provides the nitrogen.

W. J. S. (16/81).—DISTEMPER IN FERRETS.—This complaint is very infectious. Owing to the smartness and ferociousness of the animal it is practically impossible to administer medicine by the mouth. They have also so keen a sense of smell that they detect anything in the drinking water. A little sulphur or black antimony may be tried in warm milk or water. If the animals are badly affected it is better to destroy them, and the hutches, if made of wood, should be burned.

P. A. (13/128).—CATTLE DRENCH.—It is stated that this is supposed to contain magnesium sulphate, sulphur, cream of tartar, and Armenian bole. "P. A." wishes to know whether it contains cream of tartar. Recognised tests fail to find any. The correspondent asks also if cream of tartar is not found, what is substituted? Nitre and some others were sought, but with negative result. It would take a full analysis to answer this question.

Legal Queries

R. G. M. (30/81).—Licences under the Dangerous Drugs Acts are issued by the Home Office. Applications should be addressed to the Secretary, Home Office, Whitehall, London, S.W.

E. F. P. (25/1).—Since cantharides is a scheduled poison, preparations containing it must be labelled with the word "Poison," and, in compliance with the provisions of the Labelling of Poisons Order, the proportion or percentage of the preparation of cantharides actually present must be declared on the label. Thus, the hair dressing would have to bear on the label the statement:—"Contains Tincture of Cantharides B.P. 1898 . . . (or . . . per cent.)—Poison."

H. V. L. (22/81) owns a business, and in consequence of absence caused by six months' illness, employed a qualified locum during this period. In completing his form of return to income tax he asks if he may deduct from income the payments to the locum, and the expenses incurred by the illness, and any other expenses relative to absence from business during this period. [The only charge which may be deducted in computing the business income is the salary to the locum, this being a necessary expense of the business. The expenses of the illness will not be admissible as a charge against profits for income-tax purposes.]

F. R. H. (28/81) asks can a duly qualified chemist and druggist sell vin. quiniæ B.P. without a licence, and if not, could he do so by obtaining a permit from the Inland Revenue officer. [It is not the practice of the Commissioners of Customs and Excise (within whose province the matter falls) to require an excise licence to be taken out for the sale of this by a duly qualified chemist. But there is the question of whether it may not be necessary to hold a justices' licence for the sale even by a duly qualified chemist. In the present unsatisfactory state of the law, it can only be said that if the police take proceedings for the sale without a justices' licence of a liquid sold as a wine the defendant will have to prove that it was not a wine; and if the magistrates have any evidence upon which they can come to the conclusion that it was not proved that the liquid was not a wine, the seller is liable to conviction. In any case of doubt as to liability to take out an excise licence for the sale, this can be settled by making application to the Commissioners through the local officer of Customs and Excise.]

Subscribers' Symposium

Warning

We are informed by a subscriber (30/1) in the Hackney district of London that the old trick of presenting a spurious cheque (and taking change) in payment for goods has reappeared. Our subscriber's suspicion was aroused by the fact that the goods, ostensibly for an accouchment case, were not quite what would be usual in such an event.

Retrospect of Fifty Years Ago

Reprinted from

The "Chemist and Druggist," February 15, 1879

A Story from La Mortola

Mr. Hanbury gives for the first time in print an amusing though most vexatious occurrence, which happened to a friend, a zealous botanical collector. Arriving at the Custom-house, on the frontier, many specimens of plants collected and dried in the South of France "were taken out of the pressing paper, pounded up to powder, and then burnt. His intense disgust was not lessened the next day by observing that the Custom-house officers allowed a much larger lot of dried plants, to wit, a load of hay for horses, to pass from France to Italy without comment." It would have been well if the authorities had acted upon the motto of Talleyrand, *Pas trop de zèle*. These wonderful precautions were taken with a view of preventing the arrival of that dreaded wine-pest, *Phylloxera*.



[Commenced C. & D., July 5, 1924]

Premier Jus.—The chief source of supply is the Argentine Republic. Limited supplies are produced in Australia and a little in North America. Beef and mutton premier jus is made from the kidney and bowel fats and taken from the carcasses of animals immediately they are slaughtered. The fats are thoroughly cleansed in warm water and then cooled off at low temperature for some hours, to become hardened. The hard lumps are then cut up, shredded and finally ground and put into steam-heated melting kettles and brought to a temperature of 42° C. Salt is sprinkled on the top of the heated fat, causing the finest grade to come to the surface. This is run off into shallow tin trays and, when cooled, is called premier jus. The material is cut up into three-pound pieces, wrapped in canvas cloths and pressed. The colour is white to cream. Premier jus is largely used in the manufacture of margarine. It is also used as a best-quality cooking fat and for various other edible purposes, such as for shredded suet when mixed with rice flour. It is used in considerable quantities on the Continent, and Rotterdam is the world's leading market and distributing centre.

Premises, Construction.—As a rule, before building new premises or making structural alterations to existing premises, it is necessary to obtain the sanction of and have the plans approved by the local authority in conformity with local by-laws. These formalities may have to be complied with even when the proposed structure is nothing more than a shed or outhouse. In some districts it is permissible to erect buildings of less than a prescribed cubic capacity without reference to the local authority.

Price Cutting.—This is a ruse in business advertising which trades on the human desire for a bargain. It partakes of several forms, and thrives on branded goods, especially in the medicine and toilet trades. Sometimes it is masked as a sale, called a penny sale, when two articles are offered for the price of one *plus* one penny. The Americans frequently exploit this form as a "one-cent sale." Another device is to offer two articles for the price of one, and so on. Price cutting is always the result. In the drug trade it was seen in *excelsis* from 1880 to 1895, when proprietary articles were sold, sometimes at less than cost, to induce sales in other lines. It resulted in the formation of the Proprietary Articles Trade Association, which has had the effect of building up an enormous industry in protected medicinal and branded drugs and chemicals; these, by another class of trader, are being cut in price when the line is a quick-selling one. In unbranded goods, price cutting is usually fatal to business reputation.

Pricing Bureaux.—Prescriptions dispensed under the National Health Insurance Acts are sent monthly by chemists to one or other of the pricing offices set up throughout the country. There are fourteen of these offices in England and Wales. The Central Checking Bureau, controlled by the Retail Pharmacists' Union and acting as the agent of most of the Pharmaceutical Committees, checks about 10 per cent. of all prescriptions priced. In Scotland prescriptions are similarly dealt with by the Drug Accounts Committee, which has a Central Checking Bureau as part of its organisation. (See National Health Insurance.)

Prickly Ash Bark.—In the United States two species of *Xanthoxylum* (N.O. *Rutaceæ*) are sold under this name, one of which, *Xanthoxylon Americanum*, Miller, is distinguished as Northern prickly ash, and the other, *Xanthoxylon Clava-Herculis*, Linné, as Southern prickly

ash. The former occurs from Quebec to Minnesota and south to Georgia and Nebraska, and the latter from Virginia to Arkansas and south to Florida and Texas. Both are official in the U.S.P., but the drug is not much used in this country except by herbalists. The Northern bark occurs in commerce as a mixture of cut and broken pieces measuring up to 15½ cm. in length, 22 mm. in width, and 0.5-2 mm. in thickness, partially quilled. The outer surface is grey to brownish-grey, slightly striated longitudinally and wrinkled with numerous whitish lenticels, with inner bark yellowish or orange, inner surface yellowish-white, finely striate, and usually with numerous bright, shining crystals; the fracture is short, the taste bitter and acrid, becoming pungent. Scrapings from either the inner or the outer surfaces show numerous rod-shaped crystals and flat prisms (0.015-0.25 mm. long), and numerous oil secretion reservoirs are visible in the parenchyma. The Southern prickly ash bark is rather larger, thicker, as a rule up to one to four mm. thick, in irregular, oblong, flattened pieces up to 40 cm. in length, and marked by numerous large barnacle-like projections of cork up to 3½ cm. in thickness, frequently surmounted by a small spine. The inner surface is only obscurely striate, and does not show numerous crystals as in the Northern bark, according to the U.S.P. description. In Squibb's Atlas, however, these crystals are said to be present in the Southern prickly ash bark. Probably some confusion occurs in commerce between the barks of different species of *Xanthoxylum*. Most of them, however, possess the same pungency. The active constituents of prickly ash bark appear to consist of two resins. From the Northern bark a crystalline substance named xanthoxylin has been obtained, and from Southern prickly ash bark an alkaloid, probably herberine. Prickly ash bark acts therapeutically as an arterial stimulant and causes diuresis and diaphoresis, and is used something like guaiacum in rheumatic affections. The fluid extract is the preparation generally used, in doses of 30 minims. The name xanthoxylin is also applied to a resinoid extractive prepared by pouring a tincture into water. It is given in doses of one to four grains. Excellent illustrations of the two barks are given in the "National Standard Dispensatory" (1905, p. 1649), and a representation of commercial specimens appears in Squibb's "Atlas of Official Drugs" (pp. 248, 249). The bark of *Aralia spinosa*, L., is known by the same common name, and may be accidentally substituted for it, but it has transverse ridges, usually bearing slender spines, and the taste is much less bitter and biting than that of *Xanthoxylum*.

Primage.—Formerly, a payment or allowance known as primage was paid by the shipper of goods to the master of the ship for loading them. Nowadays, primage is usually provided for in the bill of lading and is paid to the shipowner. The amount varies according to the custom of the particular trade.

Prime Cost.—The direct expenses of production added to the cost of labour—i.e., the direct productive wages and the cost of raw materials, with the costs or charges applicable to the same, such as freight and carriage inwards. Cost of labour, wages, freight, etc., is known as flat cost, so that this *plus* direct expenses of production is called prime cost. Direct expenses of production are chiefly rent, rates and taxes, power, fuel and insurance, repairs and renewals of plant.

Primrose, *Primula vulgaris* (N.O. *Primulacæ*).—In early times this plant was considered to be an important remedy in muscular rheumatism, gout and paralysis. In the United States a tincture of the fresh plant (in bloom) of the strength of 10 ounces to a pint of alcohol was given by Professor Scudder in doses of one to ten drops in extreme sensitiveness, restlessness and insomnia. An infusion of the root is taken in tablespoonful doses. According to Lewis' "Materia Medica," 3rd edit. (1784), p. 479, the leaves and root seem to resemble in some degree those of *Asarum*, acting as strong emetics when snuffed up the nose, and the root shows emetic properties when taken internally. Gerard reports, as the experience of a skilful practitioner, that a dram and a half of the powdered dried root, collected in the autumn, "purgeth by vomit very forcibly but safely in such manner as *Asarum* doth." The name primrose is written

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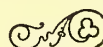
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DURING FEBRUARY ONLY, in order to introduce to you and your customers our newest odour, Bronnley's "English Fern," we are making a special offer of our BATH SOAP No. 1007, *against a window and counter show*. With every gross ordered we will send one dozen "ENGLISH FERN" BATH SOAP, FREE OF CHARGE, carriage paid.

Odours available :

VERBENA	ROSE	SANTAL	JASMIN	VIOLET
LAVENDER	CARNATION	COLOGNE	SWEET PEA	ENGLISH FERN

76/- per gross nett.

9½d. per tablet	} Retail.
4/6 per box of 6	

The above offer shows you a return of 62½% on your outlay.

BRONNLEY'S

LONDON W3

HYDROGEN PEROXIDE

IN BOTTLES—ALL STRENGTHS

Exceptional Stability and Purity

ATTRACTIVE TERMS

GENOXIDE LIMITED, LUTON

May we call your

attention to:—

PETROLAX

(BROWN CARTON)

(REGISTERED TRADE MARK)

THE IDEAL PARAFFIN AND AGAR-AGAR EMULSION

PETROLAX COMPOUND

(RED CARTON)

A COMBINATION OF PETROLAX AND PHENOLPHTHALEIN

PETROLAX ALKALINE

(BLUE CARTON)

A COMBINATION OF PETROLAX AND MIST. MAGNES. HYDROXIDI

*Note the Prices:—*RETAIL 2/- (Nominal $\frac{1}{2}$ lb.) 14/- doz.

„ 3/6 („ 1lb.) 24/- „

„ 6/- („ 2lb.) 44/- „

Stocked by the leading Patent Houses, or direct from the SOLE MANUFACTURERS:—

C. R. HARKER, STAGG & MORGAN, LTD.

Mile End, London, E.1

Increased PROFITS!

UNDER Sherley's New and Permanent Terms, you are offered an extra discount of 2½% on every £2 parcel, plus a further 5% for a fortnight's window display. Suggested parcels consist of the best selling lines (P.A.T.A.) and include

SHERLEY'S

LACTOL, LACTOL BISCUITS, WORM CAPSULES, TONIC & CONDITION POWDERS AND

SHERLEY'S famous DOG & CAT Books.

You may make your own parcels from lines retailing at 5/- or less.

which are advertised to 6,000,000 people weekly in the Canine and National Press.

Write for full particulars, NOW.

A. F. SHERLEY & CO. LIMITED
18, Marshalsea Road, London, S.E.1

C.F.H. 31

"RATMOUSINE" NOT A VIRUS

In 7½d. and 1/3 collapsible tubes. Neatly cartoned.
A handy package, good seller and profits. For Home and Export.
Not affected by D.D.A. Regulations & recommended by Ministry of Agriculture
Try a stock through any distributor
NEVER FAILS.



F. FARMER & CO.
HOMERTON

The Chemist's Compact Library

MONEY-MAKING AND
MONEY-SAVING BOOKS

EVERY BOOK BY
AN EXPERT.



May be obtained at the published prices from any
Wholesale Drug or Sundries House, or from

THE CHEMIST & DRUGGIST
42 CANNON STREET, LONDON, E.C.4

Branch Offices:

Manchester and Sheffield, England;
Melbourne and Sydney, Australia.

PROFIT by displaying NONN!

Nonn enjoys phenomenal sales. Are you getting your share? If not, get in touch with us now for a supply of show material and literature. The free booklets will be found very successful in building big business in Nonn and a special booklet showcard is now available. Also dummy cartons and an attractive circular design, as shown. This latter can be had either as a showcard to stand or to hang—or ready gummed as window bill. Get your full share of trade by displaying Nonn!

Nonn FOR NERVES RESTORES SELF-CONFIDENCE

PRICES AND PARTICULARS. Nonn is supplied in RED cartons for MEN and in BLUE cartons for WOMEN. P.A.T.A. 3/- per carton. Wholesale 27/- doz.

SOLE DISTRIBUTORS:

PROPRIETORS OF NONN LTD.,
45 GORDON SQUARE, LONDON, W.C.



Link up with Nujol advertising

Nujol advertising for 1929 is still larger, embracing more papers, covering a wider area, and is to continue throughout the year. Its purpose is to bring about daily use of Nujol by the fit as well as the ailing to ensure regular habits and good health.

No retailer should neglect frequent window and counter displays to link up his shop with this advertising.

A postcard will bring particulars of Special Bonus Offers for Window Display.

PRICES:

2/- size
16/10 per doz.
3/- size
25/2 per doz.
13/6 (100 oz.
Hospital size)
117/6 per doz.

Nujol

REGISTERED TRADE MARK

Distributors for NUJOL LABORATORIES:

ANGLO-AMERICAN OIL CO., LTD.
ALBERT STREET, CAMDEN TOWN, LONDON, N.W.1

Telephone:
Hampstead 8066.

Telegrams:
"Nufinjol-Norwest-
London."

THINKING OF OINTMENTS?

TEST
by specifying when ordering

"SPUN"

COLD CREAM

BORIC
OINTMENT

ZINC
OINTMENT

CATAPLASMA KAOLIN
B.P.C.

GALL and OPIUM
OINTMENT
ETC., ETC.

QUALITY IS THE THING **"SPUN"** IS THE NAME
that distinguishes the best from all others.

"SPUN" OINTMENTS

may be ordered through:—

Messrs. BUTLER & CRISPE,
80-82 Clerkenwell Road, London, E.C.1

Messrs. W. EDWARDS & SONS,
14-18 Nile Street, City Road, London, N.1.

Messrs. MAY, ROBERTS & CO., LTD.,
7-13 Clerkenwell Road, London, E.C.1.

Messrs. FRANCIS NEWBERY & SONS, LTD.,
27-28 Charterhouse Square, London, E.C.1.
13 Crichton Place, Cardiff, and
12 School Lane, Liverpool.

Messrs. SANGERS, 258 Euston Road, London, N.W.

Messrs. W. SUTTON & CO., Druggists' Sundries,
London—76 Chiswell Street, London, E.C.1.

or ORDER DIRECT FROM:

ROBERT BLACKIE

(SOLE MANUFACTURER)

SHEN WORKS, TOWER BRIDGE ROAD,
LONDON, S.E.1

Send for Illustrated Catalogue.

Samples post free.

*Phone: Hop 2422 (2 lines).

Telegrams: "Ushenspuna, London."



a useful product
that will bring you
profitable business

Speddo—a product of the United Alkali Co. Ltd.—appeals to the housewife as a cleansing product which, although cheap, is efficient and makes a formerly disagreeable task easy to perform.

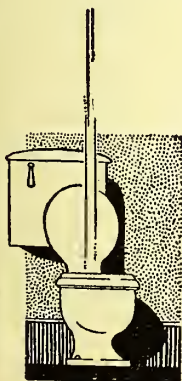
Speddo appeals to the retailer as an efficient product that sells well and gives him a good profit.

WRITE for
samples, prices
and full information
to:—

**IMPERIAL
CHEMICAL
INDUSTRIES
LIMITED,
LONDON, S.W.1.**

Sales Offices at:
Belfast, Birmingham,
Bradford, Bristol, Dublin,
Gateshead - on - Tyne,
Leeds, Leicester, Liver-
pool, London, Manchester.

Agents for Scotland:
Arthur & Hinshaw, Ltd.
4 Blythswood Square,
Glasgow.



*When you require
Medicinal Non-Freezing*

COD LIVER OIL B.P.

be sure to only get the
guaranteed genuine

LOFOTEN

Quality

"VITA" BRAND

produced by

**RAGNAR SCHJØLBERG,
Bodø, Norway**

entirely in their own large and most
modern plant of latest design, from
finest possible obtainable quality
Pure Lofoten Cod Liver Oil.

PROTECT YOURSELVES

against inferior or mixed oils by
placing your orders for "Vita"
Brand under our guarantee.

STOCKS ALWAYS HELD IN LONDON

Full particulars and samples from:

BRUCE STARKE & Co.

16 Water Lane,
Great Tower Street,
LONDON, E.C.3

SOLE AGENTS FOR U.K.

*Telegraphic Address: "Starkemad, Bilgate, London."
Telephones: Royal 0137 & 0138.*

PACKED GOODS

of Quality

and other products
which

Justify Confidence

The Quality of our products is such that we have every confidence in them. Though the price is low we can guarantee satisfaction.

Ⓜ Ⓜ Ⓜ Ⓜ

CHEMICALS, DRUGS GALENICALS

All Chemicals and Drugs guaranteed to conform to B.P. where stated, and in other cases to be of absolutely first-class quality. Samples on request. Personal attention given to all orders. Trial Order solicited. All goods delivered free in London. Country free £2 and over.

Ⓜ Ⓜ Ⓜ Ⓜ

Our Speciality: PARAFFINUM LIQ.

Ⓜ Ⓜ Ⓜ Ⓜ

REDDGRAVE, BUTLER & CO., LTD.


Forest Lane, Stratford,
London, E.15

Phones: Maryland 1799. Maryland 3357.
Wires: "Paraliq, Forgate, London."

Best sellers
The public is asking for **ZEAL** CLINICAL THERMOMETERS because they are:-
GUARANTEED TO STAY ACCURATE
CONSISTENTLY ADVERTISED

Made by
ZEAL
- the name the public knows.

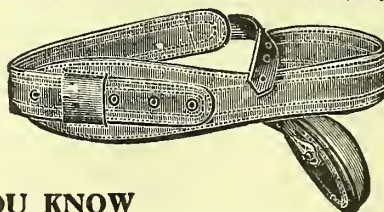
G. H. ZEAL, LTD.,
75 & 77, St. John St., London, E.C.1.



The "Hernicura" "COMFORTABLE"

Reg. No. 627925.

Potent No. 23241.



YOU KNOW

how often you have trouble in fitting customers with trusses, and how frequently dissatisfaction is expressed.

TRY

the "Hernicura" Trusses. They are easy to fit, possess great adaptability, give absolute satisfaction, and yet are most reasonable in price.

A 33-inch Truss will adjust from 30 to 36 inches.
Head is also adjustable.

Write for Price List.

Specimens on appo.

MORGAN-DAVIS & SONS LTD.

Truss and Surgical Appliance Makers

276-278 BISHOPSGATE, E.C.2.

Phone: Bishopsgate 2417.

More spent on gardens than on health!

**XL ALL NICOTINE LIQUID
INSECTICIDE**
XL ALL FUMIGATING COMPOUND
(Liquid or Cake)
XL ALL FUMIGATING SHREDS
XL ALL MILDEW WASH
XL ALL LEAF-MINER INSECTICIDE
XL ALL WHITE-FLY VAPOUR
XL ALL WEED DESTROYER, etc.

MOST of your customers spend more on their gardens than on their health. Why not stock garden goods—it would be very easy for the customer to buy poison goods (necessities in his garden) from you. Stock the **XL ALL** range—your gardening customers have known it almost since childhood and will buy at sight.

G. H. RICHARDS LTD.

234 BOROUGH HIGH STREET, LONDON, S.E.1. Telephone: *Hop 1098 & 0376.*
R.435

BATTLE'S VERMIN KILLER

Of all Patent Medicine
Houses at 3/-, 5/6, 9/-,
18/- and 36/- per dozen.

In packets at 5d., 9d.,
1/3, 2/6 and 5/- each.
(P.A.T.A.)

The *sure* destructive agent which may be confidently recommended by Chemists for quick clearance of rats and mice. (*Users' testimonials on request.*)

Prepared only by

J. C. M. BATTLE, Ph.C., LINCOLN

Two Easy-selling Pesticides

Every farmer is interested in a means of destroying rats without poison. Tell him—by leaflet or by word of mouth—about DAK Ratlime. You will make a sale and a friend. Write to-day for a supply of the leaflet, "Rat Burglars," and details of generous trade terms.

*It pays
to push
KAY'S*

Grease-banding is one of the secrets of raising blemish-free apples. It definitely stamps out the growers' worst enemy—Winter Moth. It enormously reduces other pests. Every owner of apple trees in your neighbourhood is your prospective customer for banding material. Write for descriptive leaflet and generous trade terms.



From Wholesalers or the Sole Makers :

KAY BROTHERS LTD., STOCKPORT

MORRIS, LITTLE & SON, LTD.

(OF DONCASTER)

New Address:

Premier House, Southampton Row, London, W.C.1

'Phone : TERMINUS 5807.

WEED KILLERS, HORTICULTURAL PREPS.,

SHEEP DIPS Poisonous and Non-poisonous **OF ALL KINDS**

CATTLE DIPS OF ALL KINDS

Sole Proprietors and Manufacturers of **PHENOID**, *formerly called PHENYLE*

DISINFECTANTS OF ALL KINDS

including **LYSOL** and High Co-Efficients.

It is "Quality" that maintains our reputation



Eureka WEED KILLER

LARGEST SALES

The CHEMISTS' Favourite Brand.
Sales through Agents, not direct.

Advertising matter for window display supplied, also
counter bills, booklets, etc.

Also liquid quantities at favourable prices.

Eureka

LAWN SAND

Destroys daisies and other lawn
weeds. Improves growth and
quality of the grass. Brings old
lawns into good condition.

WRITE FOR TERMS.



TINS
BAGS
KEGS

Eureka

WORM KILLER



A preparation for destroying
Worms in Lawns, Golf
Greens, etc.

In Tins at 1/3.

Also 7, 14, 28, 56 lb., and
1 cwt. bags.

These are well advertised
lines and most saleable.

"LUDA" LEADS

customers to your shop for their
supplies of

NON-POISONOUS
WEED KILLER

Satisfaction

follows

35% PROFIT TO DEALER



ADVERTISING MATERIAL SUPPLIED.

TOMLINSON & HAYWARD, LTD., 51, Newland, LINCOLN

ANTIPHLOGISTINE



Write for quotation
and secure extra
discounts.

Write for quotation
and secure extra
discounts.

THE DENVER CHEMICAL MFG. CO.

41 ST. ANN'S ROAD

LONDON, E.3



This Medicine is a certain cure for many of the most distressing ills to which Horse and Cattle Flesh is heir. It surpasses all other Remedies in its promptness of action.

WHY CATALINE PAYS TO STOCK.

BECAUSE it enjoys the largest sale of any Cattle Medicine Preparation and is on the P.A.T.A.

BECAUSE it is consistently advertised and all advertisements refer to the Chemist as the source of supply.

BECAUSE it is well packed, does what it is advertised to do, and shows the trade a satisfactory profit.

BECAUSE we do not employ travellers calling on Farmers or soliciting orders at cattle fairs or markets.

One size, retailed at face value, viz.

PER **3/9** BOTT.

*Terms - Cash with order.
Carriage paid. Cases free.*

1 doz., 36/- per doz. 6 doz., 35/- per doz.
3 doz., 35/6 12 doz., 34/6 „

Stocked by most Wholesale Houses.

THE CATALINE CO. LTD.
BRISTOL.

HORTICULTURE Demands YOUR Interest

NICOTINE *and*
NICOTINE PRODUCTS
RABBIT SMEAR
CARBO WINTER WASH
AERIAL SULPHUR
HORTICULTURAL LYSOL
INSECTICIDES
FUNGICIDES, &c.

ALL CLASSES OF WET AND DRY
SPRAYING MACHINES STOCKED

*Write to us for Price List and advice
on all problems in connection with*
AGRICULTURE *and* HORTICULTURE

W. J. CRAVEN & CO. Ltd.
HORTICULTURAL CHEMISTS
EVESHAM

WEED KILLERS

specially packed

for the

Chemist's Trade

LIQUID. Poisonous

1 to 25, 1 to 50, 1 to 100 strengths
1 pint to 40 gallon sizes

**POWDER. Poisonous &
Non-Poisonous**

In tins for 12½, 25, 50 and 100 gallons

Also

LAWN SAND, WORM KILLER, etc.

Attractive Labels and Packing

Write to

BATTLE, HAYWARD & BOWER
LINCOLN

INFLUCINE

**A Local Spray Vaccine for the
Prevention and Treatment of
INFLUENZAL COLDS
and other bacterial diseases
of the Respiratory Tract.**

Drug & Chemical Corporation, Ltd.

204-206 Great Portland Street, LONDON. W.1

Telephone : MUSEUM 8658.

25 for 10½d.
50 for 1/6
P.A.T.A.

LYCO

*Pure Culture
Yeast Tablets*

Literature and Samples supplied on request by:

**STANDARD YEAST
CO., LTD.**

**LONDON
CHISWICK
W.4**

Guarantee

*Our Lyco Yeast Tablets are
expressly guaranteed to contain
pure Culture Yeast only and
no addition of drugs or any
other ingredients is made in the
preparation of Lyco Yeast
Tablets.*



Build up your Strength

Terms and full particulars on application to the Sole Manufacturers:

THE STANDARD YEAST CO., LTD.

Lamb Distillery

CHISWICK, LONDON, W.4

Telephone: CHISWICK 3370-71.

CHEMISTS SHOULD ALWAYS HAVE IN STOCK

**TOWLE'S
PENNYROYAL & STEEL PILLS**

Advertised all over the world.
ESTABLISHED 100 YEARS.

Sole Proprietors:

**E. T. TOWLE & CO., LTD.
TOLL ST., NOTTINGHAM**

REMEMBER THESE PRICES

*—they're the basis of
BIG PROFITS!*

With FREE Mouth
Spray,

8 oz. Size, 2/-

16/6 per doz.

16 oz. Size, 3/-

25/6 per doz.

REX LIQUID INSECT KILLER is the
recognised and accepted Household Insecti-
cide. Made in England. Pleasant Perfume. It
is the consistently selling Big Profit Line that
regularly enjoys bumper seasons. See that
you are stocked up and get your share of
these BIG PROFITS.

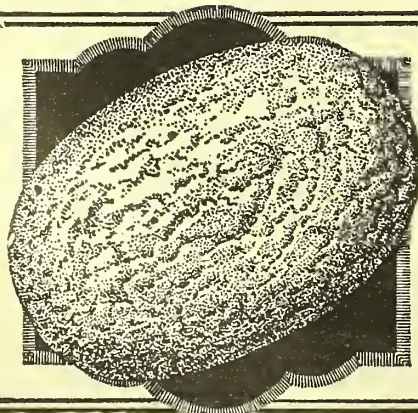
Lithographed
Guaranteed Hand
Sprayers,

2/6 each. 21/- doz.

REX

LIQUID INSECT KILLER

Tibo Products Co., Ltd., Audrey House, Ely Place, London, E.C.1



*Two thirds
actual size*

Bath Rusks

Unsolicited testimonials daily for Carr's
famous Bath Rusks which are ideal for
babies and young children. Scores of letters from
grateful mothers. Recommended everywhere.

Made only by

CARR'S of Carlisle

The Oldest House in the Trade

In the last
5 years
the sales of



TOWN TALK

LIQUID SILVER POLISH
& SILVER PLATE CLOTH
have increased
3 Fold

Get your share of the
trade by ordering from

JAMES WOOLLEY, SONS & CO., Ltd.,
Manchester
AYRTON, SAUNDERS & Co., Ltd., Liverpool
BROOKS & WARBURTON (American Drug
Supply Co.), Ltd.

Town Talk Polish Co.
Whitby St., Bradford Road, Manchester



ROBORANS

Recognised by the Medical Pro-
fession as

THE IDEAL TONIC

Prepared with or without sugar.
Supplied in 8-oz. and 16-oz. bottles.

A BRITISH PRODUCT.

ROBERTS & CO.

Pharmaciens to H.M. the King,
76 NEW BOND STREET, LONDON, W.1
And at PARIS.



MARMITE—that word is the
answer to many a diet
question that is being asked in
the consulting rooms of England
just now.

Your customers have heard
from their Doctors that
Marmite is good for them;
that it is so rich in the essential
Vitamin B—and they have
learned from their daily papers
that it means better cooking, too.

Feature the attractive
Marmite Jar in your window,
and lay in a good stock to
meet the extra demand.

RETAIL PRICES

1 oz. Jars, per doz. 6/-	8 oz. Jars, 1/2 doz. 15/-
2 oz. " " 10/-	8 oz. " per doz. 30/-
4 oz. " " 18/-	16 oz. " 1/2 doz. 27/-
16 oz. Jars per doz. 54/-	

MARMITE

THE GREAT YEAST FOOD

MARMITE FOOD EXTRACT CO., LTD.,
Mincing Lane House, 59, Eastcheap, London, E.C.3.


GIANT
RE-TREAD

How to Reduce your Transport Costs

Instead of scrapping your worn tyres send them to us for re-treading and get New Tyre Mileage for half the cost.

Giant Pneumatics re-treaded by us give up to 20,000 miles on rear wheels of heavy and fast buses. You can rely upon your tyres after treatment being equally satisfactory on your Lorry or Van.

We guarantee all work and stand by that guarantee.

Write for particulars.

Ondura Tyre Works, Bradford Road, Keighley.

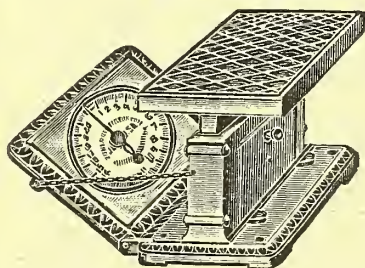
'Phone 2527.


CAR AND
COMMERCIAL

THE "JARASO"

PERSONAL WEIGHING MACHINE

BRITISH MADE



BALL
BEARINGS

Weighs from 1 lb. to 20 stone. Automatic. No weights required. Weight of Machine 20 lbs.

EXPORT PRICE 28/6 Cases Free F.O.B. LONDON

(Smallest number shipped six machines.)

This Machine can only be sold for export to BRITISH COLONIES

ALBERT C. SHOPPEE, Ltd.

(Wholesale and Export only)

Belmont St., Chalk Farm, LONDON, N.W.1

Always keep a display of

NORVIC

BLUE CARTON
CRÊPE BANDAGES

Cost	2"	2 1/2"	3"	3 1/2"	4"
Sell	12/-	15/3	18/3	21/3	24/3
	1/6	1/11	2/3	2/8	3/-

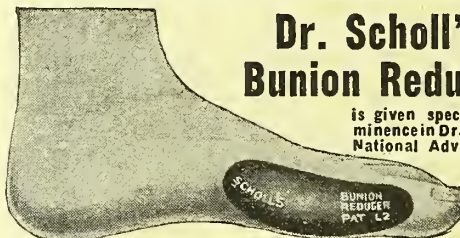
You will find it pays!

Stocked by all the leading wholesalers.



Dr. Scholl's Bunion Reducer

is given special prominence in Dr. Scholl's National Advertising.



Sales of this popular line continue to soar. A window display will attract the demand to you. Thousands are daily obtaining relief from and correction of their bunion troubles by its use. Made of pure Para rubber. Men's and women's sizes. Rights and Lefts. Retail price 2s. 6d. each.

Write to-day for full particulars.

The Scholl Mfg. Co., Ltd., Granville Square, W.C.1.

BRADY & MARTIN

NORTHUMBERLAND ROAD,
NEWCASTLE-UPON-TYNE

offer to Northern Pharmacists

Phone: Central 5168/9
Wires: "Martin, Newcastle-upon-Tyne."

GALENICALS:

COD LIVER OIL

EMULSION,

MALT EXTRACT,

PILLS, TABLETS, &c.

Special Terms for Quantities.

**Prompt Service, Keen Prices, and
Good Quality.**

WELL-KNOWN "BRADY & MARTIN" SPECIALITIES—

Hepatisal.

Krithovol.

Cascariant.

Septophon.



ROBINSON'S of CHESTERFIELD for CARDBOARD BOXES

ROUND · OVAL · SQUARE · FOLDING

ROBINSON & SONS LTD.
CHESTERFIELD & LONDON



"SAMPLING" BOXES

Illustrated above are a few of our "Sampling" Boxes.

These little boxes are very neat indeed and are fitted with self-sealing lid which can be supplied either in the dredger type or plain.

Send for samples and prices.

ROBINSON & SONS, Ltd.

Manufacturers of ROUND, OVAL, SQUARE AND FOLDING
CARDBOARD BOXES,

CHESTERFIELD

Sphagnol sales

are
rising
steadily

Sphagnol is recommended by over 12,000 doctors for Eczema, Acne, Alopecia, Psoriasis, and all skin troubles.

Virtually every chemist handling Sphagnol preparations reports increased demand. Not only the curative and antiseptic properties of the peat distillate content, but the superlative quality of the vehicle in every preparation account for this.

PEAT PRODUCTS (Sphagnol) Ltd
(Dept. C5), 21 Bush Lane
London, E.C.4

Tested, Tried and Proved

THE value of 'Yadil' is fully recognised by qualified judges. It has been sold all over the world and is being used to-day "back of beyond" as well as in the homes of our own country. Its sale is steadily increasing, old customers are retained while new ones are being added. One or two displayed bottles will quickly establish business which will prove profitable and regular. Any assistance we can give in the provision of advertising material is yours for the asking. The 'Yadil' lines cover, 'Yadil' Anti-septic (liquid and pills), 'Yadil' Ointment, 'Yadil' Pastilles and 'Yadil' Soap.

Yadil Products (1925) Ltd.
Sicilian House, London, W.C.1

To Owners of Proprietaries



Our Factory is equipped with the most modern plant for tablet and other special formula work, and is capable of an exceedingly large output. We manufacture from formulæ or from customers' own material.

If desired, we can provide a distinctive pack, and prepare complete, ready for sale. We offer expert advice, efficient service, and absolute fidelity to formula, with strict secrecy. Enquiries from Principals invited.

May we quote You?

We shall be Exhibiting at the
BRITISH INDUSTRIES FAIR,
Stands Nos. K 78 and K 89.

MENLEY & JAMES
LTD.
64 Hatton Garden
E.C.1

JULES DENOVAL & Co.

MANUFACTURERS OF
MEDICATED
LOZENGES AND PASTILLES

LOZENGES.

IODIZED THROAT LOZENGES.

Decorated Tins, each 24. 4/- per doz.

CURIOUSLY STRONG PEPPERMINT LOZENGES.

J. D. & Co. 3/4 per lb.

CINNAMON & FORMALIN LOZENGES.

Screw-capped Bottles, each 50. 6/6 per doz.

PINE-TREE LOZENGES.

2 oz. Decorated Tins. 4/8 per doz.

BROMPTON CHEST & LUNG LOZENGES.

1 oz. Tins, 3/6 per doz. 2 oz. Tins, 5/- per doz.

BISMUTHATED MAGNESIA TABLETS.

2/- per lb.

BISMUTH LOZENGES B.P.

3/2 per lb.

LINSEED LIQUORICE & CHLORODYNE LOZENGES.

1/9 per lb.

CHOCOLATE WORM CAKES.

Tinfoiled and Wrapped. 11/- per gross.

IODIZED CATARRH PASTILLES.

1 oz. Decorated Tins. 4/6 per doz.

COUGH CANDY.

1/2 per lb. 56 lbs. at 1/- per lb.

LICORICE & MENTHOL GLOBULES.

Cushion Shape. 3/6 per lb.

GUM PASTILLES.

Antiseptic	Breathe Easy
Catarrh	Glycerine, Lemon & Honey
Eucalyptus & Menthol	Aniseed, Honey &
Glycerine & Black Currant	Chlorodyne
Pynoline	Creosote Compound.

2/6 per lb. (free 4 lb. tins).

GELABASE JUBES.

Aniseed, Honey & Chlorodyne	} 1/8 per lb. (free 4 lb. tins).
Child's Own Cough	
Cherry Chest & Lung	
Blackcurrant & Glycerine	
Glycerine, Honey & Lemon	
Phosph. Orange Tonic	
Glycerine & Paregoric	

OIL OF EUCALYPTUS GLOBULUS PLATYPUS BRAND.

1 lb. bottles	.. .. .	3/6 per lb.
10 lb. tins	.. .. .	3/3 per lb.
28 lb. "	.. .. .	3/2 per lb.

Carlton Works,
ASYLUM ROAD
LONDON, S.E.15



GLAXO FOOD PRODUCTS.

	RETAIL	NET TRADE PRICE
GLAXO—Standard Full-cream	1/6	14/5 per doz.
GLAXO—Standard Full-cream	2/6	24/- per doz.
GLAXO—Standard Full-cream	4/6	43/2 per doz.
GLAXO—Standard Full-cream	7/6	72/- per doz.
PREScription (Humanised)		
GLAXO	2/-	19/3 per doz.
PREScription (Humanised)		
GLAXO	4/-	38/5 per doz.
GLAXO MALTED FOOD ..	1/3	12/- per doz.
GLAXO MALTED FOOD ..	2/4	22/5 per doz.
GLAX-OVO	1/6	14/5 per doz.
GLAX-OVO	3/3	31/2 per doz.
GLAX-OVO	6/-	57/7 per doz.
GLAX-OVO (7 lb. tins) ..	16/6	13/3 per tin
GLAXO or GLAX-OVO MIXER	2/-	1/7 each

★ Known by nurses as Sunshine Glaxo.

GLAXO TOILET REQUISITES.

	RETAIL	NET TRADE PRICE
*GLAXO BABY SOAP (3 in box) ..	1/6 per box	13/6 per doz.
GLAXO BABY CREAM ..	1/6 per tube	13/6 per doz.
GLAXO BABY POWDER ..	1/- per tin	9/- per doz.

* In Irish Free State soap prices are one-third more

Ostelin

VITAMIN D PREPARATIONS.

	RETAIL	TRADE DISCOUNT
OSTELIN in GLYCERIN ..	2/6 per 8 c.c. phial	25 per cent.
Ditto in bottles of 2, 4, 8, or 16 oz.	6/3 per ounce	25 per cent.
VETERINARY OSTELIN ..	4/6 per ounce	25 per cent.
OSTELIN TABLETS ..	2/6 per bottle of 45	25 per cent.
OSTELIN TABLETS ..	12/6 per bottle of 250	25 per cent.
OSTELIN EMULSION or CREAM ..	2/6 per 8 oz. bottle	25 per cent.
OSTELIN & PARATHYROID TABLETS ..	8/9 per bottle of 100	25 per cent.
OSTELIN .. AMPOULES (1 c.c.) ..	3/- per box of 3	25 per cent.
OSTELIN .. AMPOULES ..	8/6 per box of 10	25 per cent.
ELIXIR OSTELIN for dispensing ..	5/8 per ½ lb. bottle	25 per cent.
ELIXIR OSTELIN for dispensing ..	10/- per 1 lb. bottle	25 per cent.
OSTOMALT (Ostelin, Malt Extract and Orange Juice) ..	2/6 per ½ lb. jar	20 per cent.
OSTOMALT (Ostelin, Malt Extract and Orange Juice) ..	4/- per 1 lb. jar	20 per cent.

Ostelin is now entirely tasteless.

Order through your usual Wholesaler

maltINE

MALTINE PRODUCTS	SMALL	LARGE	HOSPITAL SIZE
MALTINE, Plain ..	2/3	4/-	15/6
MALTINE with COD-LIVER OIL (30%) ..	2/3	4/-	15/6
MALTINE with CAS-CARA SAGRADA ..	3/-	5/6	22/6
MALTO-YERBINE (fluid) ..	3/-	NH	30/-
MALTINE with CREOSOTE ..	3/-	5/6	22/6
MALTINE with PEP-SIN and PANCREATIN ..	3/-	5/6	22/6

TRADE DISCOUNT OFF ABOVE PRICES, 25 per cent.

MALTINE is a malt extract of high diastatic power and contains Vitamin B in notable proportion. In combination with cod-liver oil certified to be exceptionally rich in Vitamins A and D, it presents a completely proportioned food of great therapeutic value. MALTO-YERBINE presents MALTINE in conjunction with an active extract of Yerba Santa, thus providing an admirable nutritive and expectorant mixture which contains no opiates.

Glaxo Feeder

AND ACCESSORIES.

	RETAIL	NET TRADE PRICE
GLAXO COMPLETE FEEDER (8, 4, or 2 oz.) ..	1/6 in carton	13/6 per doz.
GLAXO SPARE FEEDER (8 oz. only) ..	1/- in carton	9/- per doz.
GLAXO TEATS (7 varieties) ..	4½d. each	3/4½ per doz.
GLAXO VALVES ..	3½d. each	2/7½ per doz.
ALUMINIUM FOOD MEASURE ..	6d. each	4/6 per doz.
FEEDER MOP ..	4d. each	3/- per doz.
*MATERNITY BELT (2 sizes) ..	7/6 each	6/- each

* Not sent on approval

GLAXO TEATS.—In addition to the usual teat pierced with a single square hole, there is a fine-hole teat with a very small opening; also a premature teat for use with small feeders, and a "blind" teat which can be pierced with a needle as desired. Other varieties are pierced with one, three, or five-leech-bite slits.

Important Notice to the Trade

Ovacoids- Testacoids



Regular medical propaganda is now being conducted throughout the whole of the United Kingdom and Irish Free State for the REED & CARNRICK'S Products, and we solicit the co-operation of the Pharmacists in the execution of prescriptions they will be receiving for these old-established Endocrine Specialities. Price List and Literature on application to Sole Distributing Agents.

Order through your Wholesaler. Liberal Discounts.

"OVACOIDS" TABLETS

Trade Mark Brand, Ovarian Hormone.

"TESTACOIDS" TABLETS

Trade Mark Brand, Testicular Hormone.

"PEPTENZYME" ELIXIR, TABLETS AND POWDER

Trade Mark Brand, Digestant.

"PROTONUCLEIN" TABLETS, POWDER AND OINTMENT

Trade Mark Brand, Mixed Glands.

"NEPHRITIN" TABLETS

Trade Mark Brand, Re-Zyme Diuretic.

"PANCROBILIN" LIQUID AND PILLS

Trade Mark Brand, Intestinal Digestive.

AMPACOIDS — TROPHONINE — ANALEPTINE — ZYMOCIDE

Founded 1860.

REED & CARNRICK

JERSEY CITY, N.J.

"Pioneers in Endocrine Therapy."

Sole Distributing Agents for U.K. and Irish Free State—

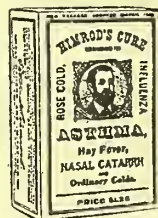
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41 Great Tower Street, London, E.C.3.

EVERY SALE OF

HIMROD'S Asthma Cure

CREATES A SATISFIED CUSTOMER
SUFFERERS SEEKING RELIEF FROM



The paroxysms of
BRONCHIAL ASTHMA
Asthmatic Hay Fever
Common Colds
Nasal Catarrh
Bronchitis

Will be quickly helped by the use of this time-tried remedy. Burn half a teaspoonful, inhale the fumes and the distress vanishes.

ON THE MARKET FOR OVER 50 YEARS

"Himrod's Cure is a well known product, very useful in many cases."

—W. J. Hadley, M. D., formerly lecturer at London Hospital.

May be had from wholesale distributors throughout the world

Himrod Manufacturing Company, Mfrs.
JERSEY CITY, N. J., U. S. A.

1/3
Bottle

"KOF-OH"

3/-
Bottle

(Government Stamped)

The GREATEST COUGH CURE for the COMING SEASON

THE Profit-bringer.

Write for Generous Trade Terms and
SPECIAL WINDOW DISPLAY BONUS.
DO IT NOW!

KOF-OH CO., LTD., Everton, Liverpool

The dog Medicine with the
largest sale in the world is

BOB MARTIN'S

TASTELESS CONDITION POWDERS



For 19/6 you can obtain a good range of Bob Martin preparations, including the tasteless Condition Powders, Worm Tablets, Worm Powders, Distemper Powders and '92 Ointment. The retail value of this stock is thirty shillings. Order either from your Wholesale House or direct from—
Bob Martin, Ltd., Southport, Lancs.

TRY AN 'ASPRO' WINDOW DISPLAY AND BUY ON BONUS TERMS

We are frequently pointing out the wonderful pulling power of the 'ASPRO' Window Display on account of its linking up with continuous and ever-increasing publicity. A test made of a display will interest all chemists who wish to increase their business.

'ASPRO' has a Tremendous Power to Build Up a Chemist's Business

A test will demonstrate what a great power 'ASPRO' Publicity is to help the Chemist. It is not only on account of the actual 'ASPRO' that it usually sells, but also on its great value in bringing customers into the Chemist's shop who would not otherwise have come in. Every time you put an 'ASPRO' window display in you connect up with a £250,000 continuous advertising activity just the same as if you put your own name at the foot of the advertisements. Why not write us for a window display to-day, also take advantage of the liberal bonus terms shown below whereby you can make an extra 17% profit?



SEND FOR ONE OF THESE DISPLAYS



Buy 'ASPRO' on Bonus Terms and Get 17% EXTRA PROFIT

Just have a look through your purchases of 'ASPRO' and you will find that you are in a position to buy on Bonus terms. Buying on Bonus terms means extra profit averaging 17% to you. So why not place your next order through your Wholesaler on Bonus terms?



WHAT THE BONUS IS

BONUS on 10's { One Gross Order - Bonus 1 doz. pkts.
Half Gross Order - Bonus 1/2 doz. pkts.
Half Gross 10's is minimum order accepted for Bonus purposes.

BONUS on 25's { One Gross Order - - Bonus 2 doz. pkts.
Half Gross Order - - Bonus 1 doz. pkts.
Quarter Gross Order - Bonus 1/2 doz. pkts.
Quarter Gross is minimum quantity.

NO BONUS ON 60's.

CONDITIONS

The only conditions made are that the Chemist who buys on these terms undertakes to show Advertising matter in his shop window for 14 days and sell at advertised prices. As 'ASPRO' is so extensively advertised, this action will not only bring customers into the Chemist's shop to purchase 'ASPRO' but should enable the Chemist's staff to make other sales to the customers. Acceptance of Bonus is considered acceptance of conditions regarding display and selling prices. For Bonuses it is not necessary to buy both sizes at the same time, i.e., single lots 6 dozen 10's or 3 dozen 25's will qualify the Chemist.

HOW TO ORDER BONUS PARCELS

We do not sell direct to the Chemist. All our business goes through Wholesalers. Orders may be sent either to your Wholesaler or direct to us. If to us, state the name of your Wholesaler so that we may forward the order on, and the Bonus will be supplied direct by us.

ORDINARY PRICES for { 6d. size containing 10 tablets - 4/6 dozen } **NOTE.**—2/6 size contains
'ASPRO' are as follows: { 1/3 size containing 25 tablets - 11/6 dozen } 10 extra tablets.
{ 2/6 size containing 60 tablets - 21/- dozen }

'ASPRO' consists of the purest Acetyl Salicylic Acid that has ever been known to Medical Science, and its claims are based on its superiority.

Agents: GOLLIN & Co. Pty. Ltd. ('Aspro' Dept.), Slough, Bucks.

No proprietary right is claimed in the method of manufacture or the formula.

'Phone: SLOUGH 608

COLD WEATHER
AHEAD—ORDER NOW**Reliance**REGD. TRADE MARK
Seamless-Moulded**HOT
WATER
BOTTLES**British made from pure
Plantation Rubber and
perfectly vulcanised.
Unique Designs.

Beautiful Colourings

Buy your Rubberware
direct from the most up-
to-date Manufacturers in
the trade—who for Forty
Years have given real good
service to the Retailer—
good profits, quick deli-
very, and Maintained
Fixed Prices.**Reliance Rubberware Ltd.**

WHOLESALE AND EXPORT WAREHOUSES:

39-40a ALDERSGATE STREET, LONDON, E.C.1

Factories: Formosa Street, and Amberley Road, Paddington, W.9

Cephos
THE PHYSICIAN'S
REMEDYLIBERAL
TRADE
TERMSPOWERFUL
ADVERTISING**ENJOYS AN
INCREASING
SALE**Write for window display
and other publicity matter to**CEPHOS LTD.**
BLACKBURNPOWDERS
AND
TABLETSRETAIL AT
1/3 and 3/-**"ONZO" OINTMENT**"ONZO" is a medicinal oint-
ment made from animal fats
and curative substances. It has
remarkable drawing power in
removing unhealthy matter
from the tissues.Recommended for—CHILBLAINS,
CORN, SPRAINS, SEPTIC
WOUNDS & SORES, DRY or
WET ECZEMA, VARICOSE
ULCERS, BURNS, Etc., Etc.

Price 21/- (wholesale), 27/- (retail), per dozen jars

Trade Enquiries to—

**ONZO Ltd., 188 St. Vincent Street,
GLASGOW.**


QUAIN

SUNLIGHT BATH

Double purpose—a sunbath and an electric fire, low price and absolute safety, sell the Quain.
Preferential discounts and full support given you. Write for details.

"BRITISH QUAIN SUNLIGHT, LTD., 20-21 LAURENCE POUNTNEY LANE, E.C.4."

CAMWAL

TABLE WATERS - in Syphons & Bottles
 LEMONADE POWDER } in Packets, Cartons,
 and Canisters,
 AQUAPERIA WATER } **WINDOW**
 or SALTS (P.A.T.A.) } **DISPLAYS.**
 LEMON SQUASH - in 26 oz. Bottles.
 (with plain or Soda water forms a delicious drink).

HOME and EXPORT PRICES and TERMS on application.**CAMWAL, Ltd.** LONDON, MANCHESTER, BRISTOL
BIRMINGHAM, HAREBOURNE, E.C.4.

City Office: 52 Queen Victoria Street, LONDON, E.C.4.

*Phone: City 4497.

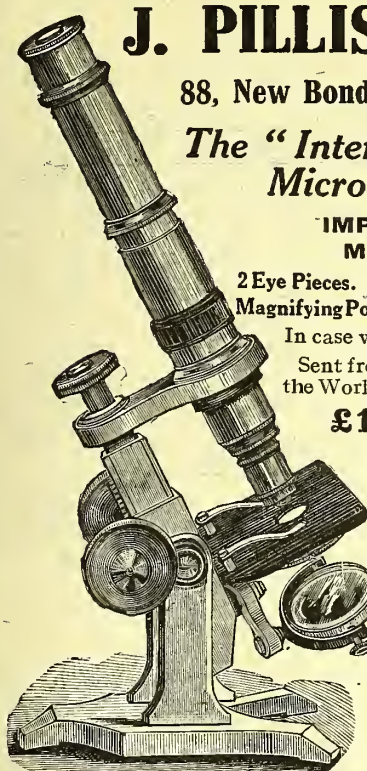


"Fine 'Tosse' Products"

**NITROSCLERAN
BISMOGENOL
EKZEBROL**

EXTENSIVELY ADVERTISED TO THE MEDICAL PROFESSION

Importers: **BOXALL SMITH & CO.**
163a Strand, London, W.C.2

**J. PILLISCHER**

88, New Bond St., W.1.

*The "International"
Microscope***IMPROVED
MODEL**2 Eye Pieces. $\frac{5}{8}$ & $\frac{1}{2}$ Object Glass.
Magnifying Power 50 to 420 diams.

In case with lock and key.

Sent free to any part of
the World on remittance of**£14 : 6 : 0**

"The Lancet" says:
"We can conscientiously recommend it to all who really want a useful instrument."

Enquiries invited
for all other kinds
of Microscopes,
Optical and other
scientific instruments.

15 GOLD MEDALS
16 GRAND PRIX

*To Patent Medicine Manufacturers.***The Australian Drug Co. Ltd.**Wholesale Druggists and Manufacturing Chemists,
Australia House, Sydney, Australia.**AUTHORISED CAPITAL £500,000**

The above Company is prepared to enter into negotiations with the Proprietors of Patent Medicines, etc., to manufacture their products in Australia. Terms can be arranged on royalty or straight out purchase. The complete manufacturing of these preparations in Australia means a big saving in duty, thus ensuring a bigger profit to the proprietor and a wider field for advertising.

Bankers: **THE QUEENSLAND NATIONAL BANK LTD.**, 8 Princes Street, London, E.C.2,

from whom all information as to the financial position of the above Company can be obtained.

**CONFIDENTIAL INFORMATION
ANSWERED BY RETURN MAIL.**

THE AUSTRALIAN DRUG CO. LTD.

Box 1631 B.B. G.P.O.

SYDNEY, AUSTRALIA.

**AN OLD FASHIONED—BUT REALLY EFFECTIVE
remedy for COUGHS, COLDS, IN-
FLUENZA and BRONCHIAL troubles.**

Licoricine
ACTS LIKE MAGIC

Prices 10½d., 1s. 3d. and 3s.

MANDALL & CO. Ltd., 17/23 Stepney Rd., Newcastle-on-Tyne.**TERMS.**

10½d. size, 8/6 per doz.
1/3 " 12/- "
3/- " 27/- "
Less 5% dis. on £6 orders.

10½d. size, 8/1 per doz.
1/3 " 11/5 "
3/- " 25/8 "
Carriage paid on orders of
£2 and over.

SOLAZZI

The Chemist's Brand
LIQUORICE JUICE

**SOLAZZI JUICE IS GUARANTEED
TO CONSIST ENTIRELY OF THE
CONDENSED EXTRACT OF FINEST
CALABRIAN LICORICE ROOT
WITHOUT ANY ADMIXTURE WHATEVER**

Should any enquiry as to the composition of SOLAZZI be received from the public, Chemists are asked to emphasise the fact that SOLAZZI is not included in the category of Secret Remedies, and that the accompanying guarantee obtains with every parcel.

To all MONSOL Stockists

¶ Owing to a recent interpretation of the Pharmacy Acts

MONSOL LIQUID

is now labelled "Poison."

¶ Each bottle of Monsol Liquid must bear—

- (a) The name and address of the Retailer, and
- (b) The appropriate declaration required by the Labelling of Poisons Order.

¶ The sale of Monsol Liquid is thus confined to qualified pharmacists.

¶ Slip labels containing the appropriate declaration will be supplied free of charge for labelling present stocks. Applications for these labels should be addressed to the Manufacturers:—

THE MOND STAFFORDSHIRE REFINING CO., LTD.

47 VICTORIA STREET

LONDON, S.W.1

THE CHEMIST AND DRUGGIST SUPPLEMENT

42 CANNON ST.
LONDON E.C. 4

FEBRUARY 2, 1929.

This Supplement is inserted in every copy of The Chemist & Druggist.

THE SUPPLY OF SUPPLEMENTS

The clerical work in connection with the posting of spare copies of the Coloured Supplement week by week has increased to such an extent that we have been compelled to reorganise our system of distribution. Our readers will please note, therefore, that in future, instructions can be accepted for not more than six successive issues of the Supplement at a time, and that in every case the name and full postal address should be written on.

Post Office Wrappers, Stamped ONE PENNY, to ensure prompt delivery.

If wrappers bear a halfpenny stamp only, postal delivery is delayed.

Loose stamps will not be accepted.

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ALL ADVERTISEMENTS INTENDED FOR
INSERTION IN THIS SUPPLEMENT

MUST REACH US
NOT LATER THAN

FIRST POST THURSDAY MORNING.

CHEMISTS' TRANSFERS.

Messrs. Orridge & Co., 56 Ludgate Hill, E.C.

Telephone No.: CITY 2283.

May be consulted at their Offices on matters of Sale, Purchase and Valuation,

1.—LONDON, S.W.—General Retail Business, with Kodak Agency and N.H.I.; returns approximately £3,000 per annum; net profit, after paying manager's salary, exceeds £500; scope for increase; double-fronted shop; held on lease; price to be arranged; further details on application.

2.—LONDON, S.E.—General Retail and Prescribing Business, with opening for Photographic; returns £1,100 per annum, with scope for increase; rent £80 per annum; living accommodation; held on lease; price to be arranged.

3.—BRIXTON.—General Retail Business, with Kodak Agency and N.H.I.; returns about £1,900 per annum, at good prices; stock and fixtures estimated at £1,250; living accommodation; vendor owns the property and would sell same or grant a lease; terms, valuation of stock and fixtures and a sum for goodwill to be agreed.

4.—NORTH LONDON.—General Retail and Dispensing Business; returns £1,600 per annum, at usual prices; good living accommodation; long lease; stock and fixtures estimated at £1,000; price £1,350.

5.—WESTERN SUBURB.—General Retail Business with Kodak Agency and N.H.I.; established 25 years; returns about £1,900 per annum, with gross profit one-third; double-fronted shop, well fitted and stocked; rent £60; sub-let £65; held on lease; price £1,150.

6.—PECKHAM.—Retail and Prescribing Business; established many years; returns average £20 weekly, increasing; rent 15s. weekly; lock-up shop; held on lease; price £550.

7.—HOME COUNTY.—General Retail Business, with Kodak Agency; returns, under management, about £2,000 per annum; good living accommodation; new lease will be granted; terms, valuation of stock and fixtures and sum for goodwill to be agreed.

8.—LANCS.—Mixed Retail and Dispensing Business, with Kodak Agency; returns exceed £2,100 per annum, with net profit approximately £500; double-fronted shop, well fitted and stocked; good house; moderate rent; 14 years' lease; price £1,650, or valuation terms entertained.

9.—WEST COAST.—General Retail Business, with Optical connection; returns last year £2,047, with net profit £552; double-fronted corner shop, fairly fitted and very well stocked; good living accommodation; rent £95 per annum; new lease will be granted or the premises may be purchased; price £1,500.

10.—SOMERSET.—Country Retail Business, with Kodak Agency; very old established; returns exceed £1,500 per annum, with scope for increase; net profit approximately £400 per annum; double-fronted shop in good position; excellent living accommodation; moderate rental; long lease; terms, valuation of stock and fixtures and a sum for goodwill to be agreed.

11.—SOUTH-EASTERN COUNTY.—General Retail and Dispensing Business, with Kodak Agency; increasing turnover, last year being £1,700, at usual prices; ample living accommodation; held on agreement with option of lease; price £1,250.

12.—KENT COAST.—Drug Store for disposal; returns over £2,000 per annum, with scope for increase; there are two shops; rent £110; living accommodation; held on lease; offers invited.

13.—BRISTOL (Near).—Cash Retail Business; returns, under management, last year, £800, scope for increase; double-fronted shop; rent £75; sub-let £60; price £400.

14.—SUFFOLK.—Middle-class Retail and Dispensing Business; returns, last year, £1,450; single-fronted shop, very well fitted and stocked; 7-roomed house; renewable lease; rent £50; price about £1,000.

Messrs. O. & Co. desire to emphasize the necessity of a periodical Statement of Account by which means alone Profit, the Value of Business, &c., can be determined. Involving as this does the labour of Stocktaking and Valuation, it is often omitted and eventually becomes confusion and loss.

Valuations for Stocktaking

Messrs. O. & Co. are prepared to undertake these essential duties and make Special Terms for such service.

ORRIDGE & CO., 56 LUDGATE HILL, LONDON, E.C. 4

The Association of Manfg. Chemists, Ltd.

Business Agency, Transfer & Valuation Department

Head Offices—Kimberley House, Holborn Viaduct, London,
E.C.1 (and at 2 Bixteth Street, Liverpool).

PARKIN S. BOOTH, Accountant and Valuer. Phone: City 1261-2-3

BUSINESSES FOR DISPOSAL

- 1.—STAFFS.—Established Chemist's Business; situated on main road; unopposed in Photo and Optics; returns £24 p.w., scope for increase; lease can be arranged; rent £65 p.a.; price asked, lease and goodwill, £150, fixtures and fittings £150, and stock approx. £450. Full particulars on application. (179)
- 2.—MANCHESTER (District).—Old-established Dispensing Chemist Business in good-class suburb on a yearly tenancy at £120 p.a.; let off £117; returns average £27 per week, all cash; excellent opportunity, as quick sale is desired; good reasons. (172)
- 3.—DURHAM CO.—Chemist Business for immediate disposal; lease can be arranged at £30 p.a. rent; takings £17; Kodak and Ucal Agencies; good living accommodation. (174)
- 4.—STAFFS DISTRICT.—Chemist's Business for Sale; held on lease with 5 years to run at rental of £40 per annum; good living accommodation; good scope; price for goodwill, fixtures, lease, etc., £170; stock at valuation; cause of sale lack of capital. Full particulars on application. (169)
- 5.—HULL.—Dispensing and Family Chemist Business in busy thoroughfare (which will shortly become a main road owing to alterations); rent £26 on a yearly tenancy, which can be secured; returns £900 p.a.; lock-up shop; good prospects for a young qualified man. Further particulars on application. (170)
- 6.—SOMERSET.—Drug and Photographic Business; premises, which consist of lock-up shop with room at rear, held on lease with 8 years to run at rental of £88 p.a. inclusive; good scope for live man; price asked £400. (178)
- 7.—LONDON, S.W.—Very old-established Family Retail and Dispensing Business, occupying prominent corner position in busy thoroughfare; lock-up shop with storage accommodation; held on advantageous lease at £100 per annum; returns approximately £2,300 per annum; can be increased under personal management. Full particulars on application. (148)
- 8.—LONDON, N.—Old-established Retail Dispensing Cash Pharmacy; well-fitted shop and good stock carried; returns average £24 per week, but can be increased with capital; premises include good living accommodation, and freehold can be purchased, or lease obtained; fullest particulars on application; no reasonable offer refused. (182)
- 9.—LONDON, N.W.—Retail Dispensing Business on 13 years' lease at £52 per annum inclusive; returns £1,000 p.a.; excellent opportunity for young qualified man. Further particulars on application. (183)
- 10.—SOUTHEAST-ON-SEA.—For immediate disposal, Chemist's Business, in busy centre; premises consist of lock-up shop, with Dispensing and storage room; rent £200 per annum, progressive; returns average £1,500, could be increased. Full particulars on application. (175)
- 11.—WANTED.—Two Chemists' Businesses in or near London; net profits not less than £1,000 per annum. All communications treated with strictest confidence.
- 12.—CARMARTHENSHIRE.—Old-established Chemist's Business situated in good position on main street, with living accommodation; held on lease for 7-14 years; rent £400 p.a.; returns average £35-40; could be increased; stock approx. £8-900. Further particulars on application. (176)
- 13.—LANCS.—Old established Chemist's Business, with Wine Licence; premises consist of shop and dwelling-house; property for sale, £1,000. Full particulars on application. (177)
- 14.—LONDON, N.—Established Chemist's Business; premises, which include convenient living accommodation, held on lease, 15 years to run; rental £50 p.a.; stock approx. £285; price asked £550, all at. Further particulars on application. (180)
- 15.—LONDON, S.E.—Old-established Dispensing and Family Business; in good position; returns average £20 per week; well-fitted shop; good scope for young and energetic chemist; price, all at £550. Full particulars on application. (184)
- 16.—LONDON, S.E.—Well-situated Drug Stores; premises held on lease, with 17 years to run, at rental of £68 per annum; let off £91; returns average £25 to £30 per week; good opening for N.H.I.; growing district; fullest particulars on application. (185)
- 17.—ESSEX.—Two Chemists' Shops for immediate disposal; premises held on lease at rental of £62 and £52 respectively; returns average £1,189 and £792 per annum; price asked £1,000 all at; full particulars on application. (187)

Stocktaking and Valuation of Businesses undertaken at moderate inclusive fee. Chemists are invited to consult us in respect of their requirements in connection with sale or purchase of businesses. Chemists in the North are requested to communicate with our Liverpool Offices.

ERNEST J. GEORGE Chemists' Valuer

Invites enquiries relative to the following, which have been carefully investigated.

- 29.—ESSEX COAST.—Owner retiring; established 25 years; Family and Dispensing, with Photo; no opposition; present turnover £1,100; good opportunity for "live" pharmacist; price £250.
- 28.—SUSSEX COAST.—High-class Pharmacy, fully stocked; Library, 200 books; lady assistant; new fittings; 20 years' lease; rent £96; rates £30 p.a.; average £55 p.w. (only opened 9 months); excellent prospects; N.H.I. 300 per month; house attached, electric all through, 5 rooms, bathroom (h. & c.); price £2,500.
- 27.—POPULAR LANCASHIRE WATERING-PLACE.—Good corner Pharmacy; tram route; turnover £2,500; net profit £550; large Photographic trade; excellent scope for general increase for keen man; stock and fixtures at valuation; goodwill to be arranged.
- 26.—LONDON, E.—Main road position, doing £990 p.a.; N.H.I., Kodak Agency, good Prescribing; living accommodation; price £650, a.a.; premises must be bought (£1,000).
- 25.—LONDON, W.—Excellent opportunity for unqualified man to acquire unopposed Business doing £700 (with Kodak Agency); price £275.
- 23.—LONDON, S.W.—Old-established Family and Dispensing Business, with Photo and Optics, also N.H.I.; well-fitted and stocked Pharmacy; good house, garden, side entrance, etc.; price £1,200 (optical stock and equipment extra, and optional).
- 22.—MIDLANDS.—Excellent opportunity for young qualified man; Drug Store in growing district; population 4,000-5,000; no opposition; well fitted and stocked; good living accommodation and lease; rent 17s. 6d. weekly; present turnover £750; audited accounts; doctors and nursing home near; good prospects for N.H.I.; live Kodak Agency; qualified man could considerably increase; stock and fittings about £300; total ingoing for quick sale, £500.
- 21.—BERKSHIRE.—Unopposed position, with scope for Pharmacist; good house and well-equipped pharmacy; price of freehold, including new fixtures, £1,600; stock (about £300) at valuation.
- 19.—Special offer of Wholesale Druggist's Business in provinces; turnover about £10,000; good net profits; capable of much expansion; inquiries invited.
- 18.—CHESHIRE.—Small Family Business; immediate living for young pharmacist; present turnover £900; can be increased; favourable lease, 20 years to run; rental £52, rising to £38; no living accommodation; stock and fixtures about £1,100; goodwill to be arranged.
- 16.—LANCASHIRE COAST.—Turnover, about £1,900; profit £450; stock and fixtures, estimated £1,000; total ingoing £1,500; Kodak Agency; lease can be arranged.
- 15.—NORTH STAFFS.—Family and Dispensing, with Optics and Photography; N.H.I. average 750 scripts per month; turnover, approximately £1,500; profit about £350; price £830; premises can be bought or leased; rent 25s. weekly; living accommodation.
- 13.—DERBYSHIRE.—Old-established Business, doing £40 per week; N.H.I., Photo; good house; excellent opportunity for Optics; rent £50 per annum; price £1,400.
- 11.—LONDON, N.W.—Family and Dispensing, N.H.I., Photo; turnover £1,200; rent £140; sub-lets £103; price £450 (stock and fixtures at valuation).
- 9.—SURREY.—Family and Dispensing, with N.H.I., Photo and Stationery; turnover £1,900; good house, freehold, £800 (on mortgage if desired); price of business £1,150.
- 6.—LONDON, E.—Unopposed position; population 14,000; N.H.I., Kodak Agency, also high Prescribing; capable of considerable increase; turnover £1,517; profit £203; rent £60 per annum; sub-let £52 10s. per annum; price £875.
- 5.—LONDON, W.—Good Retail, in main road, with scope; N.H.I., Photo; turnover £1,770; rent £250; lease 18½ years; two flats over, let off; price £1,350.
- 4.—LONDON, W.—Family and Dispensing, in busy district; Kodak, Rexall and Optics; well fitted and stocked; flat above; turnover £2,080; lease 18 years; rent £200; lease and fixtures £1,300; stock at valuation.
- 1.—LONDON, E.—Established 50 years; general trade with N.H.I. and Photography; living accommodation; turnover £850; net profit £250 (plus house free); scope for increase; price £425.

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CHEMISTS' VALUERS AND TRANSFER AGENTS,

41 Argyle Square, KING'S CROSS, W.C.1

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1.—NORTH WALES COAST.—High-class Retail and Dispensing Business, with valuable specialities; returns average £2,500; splendid position; well fitted and stocked; audited accounts; price £1,600.

2.—WESTERN COUNTY.—Good-class Dispensing and Retail, in residential district; returns £1,425; net profit over £400; no immediate opposition; good stock; price £1,000.

3.—DERBYSHIRE.—Light cash Retail, under manager; returns over £1,500; scope for increase; low expenses; well fitted and stocked; price £1,100.

4.—EASTERN COUNTY.—Middle-class Retail, in small market town; returns over £1,450, increasing; low expenses; house available; heavily stocked; illness cause of selling; price £1,000, or offer.

5.—KENT.—Light Cash Retail and Prescribing; no N.H.I., but plenty of scope; returns about £1,000; good profits; low rent; own property; owner retiring; valuation terms arranged.

6.—LINGS. (Death Vacancy).—Profitable Light Cash Retail, with own specialities; returns average about £900; plenty of scope; no near opposition; good house; price, including freehold, about £1,300; worth attention.

7.—SHEFFIELD.—Cash Retail, with N.H.I. and Kodak Agency; returns average £900; net profit, £276; good unopposed position; price for quick sale, £525.

8.—WEST MIDDLESEX.—Sound Cash Retail, with Kodak Agency and good Panel; returns £1,900; audited books; low expenses; on lease; well fitted and stocked; price £1,150.

9.—VAUXHALL (Near).—Light Cash Retail, with N.H.I.; main road position; returns, under manager, £2,000; net profit £458, clear; good stock; price £1,150; personally recommended.

10.—LONDON, S.E.—Working-class district; practically unopposed; returns £20 to £25 weekly, under elderly manager; full prices; very low rent; price £550, or offer.

STOCKTAKING VALUATIONS.

We are now booking dates for February and onwards, and invite early application. Terms on application.

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Seaside town, West coast, returns over £2,000 per annum; net profit approx. £500, living accommodation, advantageous lease. Manchester, smart pharmacy for sale, property optional. Further particulars apply.

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BUSINESSES WANTED.

Number of Buyers with Cash Ready in most districts.

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"STOCKTAKING AND TRANSFER VALUATIONS."

Have yours done thoroughly by a recognised valuer with a reputation second to none.

"Your interests are Mine." Tel.: Fallowfield 113.

BUSINESSES WANTED.

SOUND Business wanted, showing net profit of about £500. Please give fullest particulars, in confidence; cash waiting; Partnership in large concern considered. 144/22, Office of this Paper.

WANTED, Business in London; turnover about £3,000; cash waiting; advertiser is ready to take over immediately. Reply in strict confidence to Mr. F. Stewart, 22 Cleveland Gardens, Hyde Park, London, W.2.

BUSINESSES FOR DISPOSAL

BIRMINGHAM.—Beginner's rare opportunity to acquire a small Business doing £9 weekly, which can easily be doubled, situated in densely populated district; no near opposition; well stocked and fitted; good opening for N.H.I.; price £350; low rent; lease can be obtained or freehold property can be purchased. Apply 145/5, Office of this Paper.

BLACKPOOL.—High-class Business, returning £2,200 yearly; excellent position; valuable lease on advantageous terms; a genuine offer and valid reason for disposal; price £1,600, about; also several first-hand offers, Lancashire, Yorkshire and Derbyshire, £500-£3,500; no triflers entertained. Brierley, Chemists' Valuer, 135 Queen Street, Newton Heath, Manchester. (Tel.: Fallowfield 113).

DERBYSHIRE.—For immediate disposal, a valuable Business; owner leaving trade; rent £50; good house and lease; takings average £40 per week; price for quick sale £1,400; a good Panel and Kodak Agency; best position in good market town. Apply 145/19, Office of this Paper.

HAMMERSMITH.—Middle-class neighbourhood; rent and rates £153 per annum; part sub-let (decontrolled) at £104; 18½ years left on lease; returns £33 per week; gross profit 40%; audited accounts; under unqualified ownership; stock and fixtures £550; will take £1,000. 141/935, Office of this Paper.

HUDDERSFIELD.—Business for Sale, well stocked and good fixtures, at valuation; good store rooms above and cellars in basement; option of buying premises. Full particulars to bona-fide cash purchasers only. 137/7, Office of this Paper.

LANCASHIRE (seaside resort).—Genuine Business; returns exceed £2,100; net profit over £500; long lease; double-fronted shop; Kodak Agency; living accommodation if required, or can be let off to more than cover rent of house and shop; good reason for selling; price £1,650, or near offer; a bargain. 145/7, Office of this Paper.

LONDON, S.E.—Small middle-class Family; £16 to £20 weekly; good prices; N.H.I. nearly 200 monthly; small rent; lock-up, but comfortable; capable of extension; suit lady, elderly or beginner; present owner 8 years; price £275, all at. Apply 145/6, Office of this Paper.

LONDON, W.—Main road; bus stop outside door; thickly populated district; spacious shop; lock-up; takings approximately £2,200; net £550; business is improving yearly; books audited; stock and fixtures value £950; complete £1,450. 141/935, Office of this Paper.

MANCHESTER.—Business for immediate disposal, situated main road thickly populated district; takings average £1,000 per annum, plus N.H.I.; Kodak Agency; splendid living accommodation; low rental; lease can be arranged; particulars on application. 144/15, Office of this Paper.

MANCHESTER DISTRICT.—Small Drug Store; well fitted and stocked; takings £10 to £12 per week; no near opposition; good opening for young qualified Chemist (lady or gentleman); lock-up shop with room at rear; price £270. 147/3, Office of this Paper.

MIDLANDS.—Exceptionally profitable and easily worked Business; industrial area; all cash; returns over £3,500; profits over £800; audited accounts; good N.H.I.; property for sale at reasonable figure; price of business £2,500, property about £750; satisfactory references required. 143/1, Office of this Paper.

MIDLANDS.—Well-appointed Pharmacy, with excellent Optical connection; Kodak Agency; prominent corner position; main road; good living accommodation; premises freehold; scope for development; good reasons for disposing. Price and particulars to 146/22, Office of this Paper.

N.E. COAST (Yorkshire seaside town).—For immediate disposal, old-established Chemist's Business; Wine Licence; Kodak Agency; well stocked; turnover £2,400. Full particulars to bona-fide prospective buyers. 142/27, Office of this Paper.

SHEFFIELD.—Chemist's Business; residential part of the city; well situated; a real bargain to quick buyer; £325 all at; net profit, income tax returns, £276; Kodak; Nyal Agency; suit young man. 144/24, Office of this Paper.

SOUTH-EAST COAST.—Death vacancy. Old-established Retail Business; Dispensing, Optical, Photographic; freehold corner shop and living accommodation; centrally situated; main street; turnover approximately £1,500; capable expansion; inclusive price £2,200; payment by instalments considered. 142/940, Office of this Paper.

SOUTH WALES SEAPORT TOWN.—Business for immediate sale; lock-up shop, well stocked and fitted; unopposed, in rapidly growing district; rent £39 per annum; splendid opportunity for young Pharmacist; for quick sale £500, or nearest offer. Full particulars on application. 141/4, Office of this Paper.

WEST OF ENGLAND.—Sound, unopposed Light Country Retail, with good Photographic connection; returns £1,200; net profit £360; good house; long garden; smart, well-equipped pharmacy; excellent stock; electric light throughout; every investigation; price £800. Apply to Sole Agents, Berdoo & Fish, Transfer Offices, 41 Argyle Square, King's Cross, W.C.1.

YORKSHIRE.—Family and Agricultural Business, with large turnover at profits above average; several valuable Sole Agencies; stock and fixtures £3,500, and goodwill by agreement; owner retiring. Particulars to prospective buyers only. 146/25, Office of this Paper.

EXCEPTIONAL OPPORTUNITY.—Unopposed, very profitable Country Chemist's Business, recently opened and already taking over £11 weekly; growing district within easy reach of London; unlimited scope; nearest opposition 4½ miles; valid reasons for disposal; will accept £350, or near offer, for a quick sale. 145/40, Office of this Paper.

FOR Sale, in good-class neighbourhood, London, S.E.; turn-over £20 per week; Panel about 4,000, and constantly increasing; rapidly developing district; several doctors living near; well-stocked, handsome-fitted shop; good house; satisfactory reasons for disposal. Address 145/20, Office of this Paper.

SALES BY AUCTION.

IMPORTANT AUCTION SALE
of the whole of the costly
TRADE FITTINGS AND SHOWCASES

SAINSBURY'S DRAPERY and FURNISHING STORES,
OBELISK BUILDINGS,
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including mirror-lined and airtight Wall Showcases, Silent Salesmen, handsome mirrored Wall Screens, 300 bevelled plate Mirrors, Perfumery Showcases, Mahogany Counters, 2,000 yards Linoleum, Chairs, etc.

B. NORMAN & SON

will Sell by Auction, on the Premises, as above,
Thursday and Friday, February 7 and 8,
at 11 o'clock each day.

Catalogues of the Auctioneers, 5 Little Britain, London, E.C.1.

TO CHEMISTS, DRUGGISTS AND OTHERS.
Re Alfred Gratte, deceased.

55 COMMERCIAL ROAD, NEWPORT, MON.
MESSRS.

NEWLAND, HUNT & WILLIAMS

have received instructions from Mrs. A. Z. Gratte to Sell by Auction, on the Premises as above, the whole of the

VALUABLE CHEMIST'S STOCK AND TRADE FIXTURES of the Business carried on for many years under the title of H. J. Gratte & Sons, at the above address, on **THURSDAY and FRIDAY, FEBRUARY 14 and 15, 1929.**

The Stock comprises a large quantity of Drugs, Patent Medicines, Acids, Disinfectants, Bandages, Syringes, Face and Toilet Powders, Soaps, Tooth Pastes, Perfumes, Hair and Clothes Brushes, Razors, Sponges, a large number of Stoppered and Medicine Bottles (assorted sizes), Shop Rounds, Cameras, and Photographic Requisites, etc., etc.

The Shop Fittings, which will be sold on the second day, comprise:—Mahogany glass-fronted Counters, a Mahogany Silent Salesman, National Cash Register, Show Cases, glass-fronted Cupboards, Drug Fittings, comprising mirror glass-fronted Cupboards and Drawers, Dispensing Screen with show cases, Weighing Machine, plate-glass Shelves, etc.

Sale commences each day at 11.30 o'clock prompt.

On View day prior to Sale.

Full particulars of the Auctioneers, Baneswell Chambers, Newport.

BY ORDER OF THE SHERIFF.—The Stock of a Chemist, comprising Proprietary Medicines, Toilet Brushes, Soaps, Sponges, Perfumes, etc., will be included by Messrs. Newton & Co., in their Sale by Auction at 15 High Holborn, W.C.1, on Wednesday, February 6th, 1929, at 12 o'clock. View day prior. Catalogues from 27 Chancery Lane, W.C.2.

ISLEWORTH, MDDX.—The Stock and Fittings of a Chemist, comprising Toilet Requisites, Patent Medicines and Foods, Brushes, Perfumes, Drug Bottles, Mahogany Counters and Showcases, Weighing Scales and other effects, will be Sold by Auction by Messrs. Newton & Co., at No. 30 South Street, Isleworth, on Thursday, 7th February, 1929, at one o'clock. View day prior. Catalogues from 27 Chancery Lane, W.C.2.

TENDERS INVITED.

DEVONPORT GUARDIANS invite tenders for the supply, for the half-year ending September 30 next, of Drugs, as per British Drug Houses list, Surgical and other Dressings. Forms of tender may be obtained from the Master of Ford House, stamped addressed envelopes to be enclosed with all written applications. Persons tendering are to send a sample with their tender. Contractors must, if required, enter into a bond with two sufficient sureties for the due performance of their contract. Tenders are to be in the hands of the Clerk to the Guardians, Mr. Albert Gard, at the Register Office, Devonport, not later than 5 p.m. on Thursday, February 7.

PARTNERSHIPS.

ADVERTISER (M.P.S., F.B.O.A., F.S.M.C.) wishes to enter-
tain Partnership, with ultimate succession (if possible), in
high-class Pharmacy with Optical connection, South or near
London, in good residential or market town, with easy reach of
sea if possible. Replies treated with strictest confidence. 145/22,
Office of this Paper.

M.P.S., 43, experienced, seeks Partnership or Manage-
ment with view to succession; near London or
good country town; middle-class trade; highest credentials; able
to invest £1,000. 144/36, Office of this Paper.

PREMISES TO LET.

BRIXTON ROAD.—Shops, about 17 ft. by 50 ft., each with
upper part of 4 rooms, kitchen and bath; lease 21 years;
rent £300 per annum; no premium. Apply Hillier, Parker,
May & Rowden, 27 Maddox Street, W.1.

SHOPS with Flat over to Let on lease in excellent position
at Bromley; suit Chemist. Apply Baxter, Payne & Lepper,
opposite G.P.O., Bromley, Kent.

PREMISES FOR SALE.

VACANT House and Shop for Sale; recently the premises of
a very old-established Chemist on main road in Hudders-
field; no reasonable offer refused. For further particulars apply
Messrs. John Sutcliffe & Sons, Solicitors, Burnley.

SITUATIONS OPEN.

RETAIL.

[HOME.]

BIRMINGHAM.—Wanted at once, smart young qualified
Assistant for N.H.I. and Counter experience; must have
first-class references. State salary required, etc., 146/19, Office
of this Paper.

CHESHIRE.—Qualified Assistant, with good all-round experi-
ence; must be accurate Dispenser and good Salesman; a
good berth for a first-class man fit to take charge. Reply, with
usual particulars and photo, to "Punctual," 146/3, Office of
this Paper.

KENT.—Qualified Manager required for Light Retail and
Dispensing business, with house attached, in holiday resort;
thorough knowledge of Photographic and Toilet sides of the
business essential. Give full particulars in first letter, stating
age, salary required, previous experience, and when at liberty.
142/310, Office of this Paper.

LIVERPOOL.—Unqualified Assistant (male) for City business.
Full particulars of experience, etc., including salary re-
quired, to R. & J. Herman, Pharmacists, Aintree, Liverpool.

LONDON, N.W. (Hampstead).—Managing Assistant required
for high-class Family Dispensing business; only applicant
need apply who can thoroughly handle a Family Dispensing
business depending upon doctors' recommendation, with day and
night attendance; progressive position offered, with salary and
commission; references must be undeniable, and applicant a
trustworthy, energetic worker who can increase sales. State
age, salary required, and full particulars. 141/9, Office of this
Paper.

LONDON, W.—Smart qualified Manager required for Light
Retail and Dispensing business (no house); good agreement
given on increase of turnover. State age, salary required,
previous experience, and when at liberty. 142/311, Office of
this Paper.

LONDON, S.E.1.—Two Assistants, one qualified and one Junior, for working-class business and N.H.I.; age not over 30. Send full particulars, or apply personally, to Bennett's, Chemists, 79 Union Road, Newington Causeway.

LONDON, N.W.—Qualified, 24-30, experienced and of good appearance, for good-class Retail Dispensing and Photographic; must be able to commence on February 7th; please state age, height, experience and salary required; personal interview. 146/18, Office of this Paper.

LONDON, E.—Assistant, used to N.H.I. Dispensing and Counter; must also be good Prescriber; middle-aged might suit if active; usual particulars and salary required. "Aspirin," 142/959, Office of this Paper.

MAIDENHEAD.—Qualified Assistant wanted by end of February to take charge of small branch; Photographic experience essential. Apply, giving full particulars and salary required, to A. E. Breakspear, 38 King Street, Maidenhead.

MANCHESTER.—Reliable unqualified Assistant; accustomed to N.H.I. Dispensing, good Counterman and Window-dresser; permanency. State age, wage and experience, must have undeniable references, 146/6, Office of this Paper.

METROPOLITAN HOSPITAL, Kingsland Road, E.8.—Required, a whole-time Junior Dispenser (male). Applications, giving age, qualifications and experience, and stating salary required, should be addressed to the undersigned forthwith. Candidates having experience in the Dispensary of a Voluntary Hospital preferred. Herbert F. Rutherford, Secretary and House Governor.

MIDLANDS.—Wanted, a qualified lady or gentleman for Light Retail and Dispensing business; must be good Window-dresser and Salesman; wages offered £4 4s. Write full particulars, age, height, experience, references, and photo if possible, when at liberty. 145/23, Office of this Paper.

READING.—Wanted, about middle of March, qualified male Assistant to manage branch, age 25-30, of good address, accustomed to brisk cash business, and must be thoroughly recommended as being capable and trustworthy. Apply, stating age, height, experience, if married or single, and salary required, to 141/934, Office of this Paper.

ST. MARY'S HOSPITAL, W.2.—Medical Dispensing. Wanted, a Junior Assistant Dispenser (female), not over 30; Minor qualification; salary £150 per annum, with luncheon and tea; hours 9 to 5, late duty and Sunday duty every fifth week. Applications, stating age and experience, and accompanied by not more than three testimonials, to be sent to the Dispenser.

S.E.5.—UNQUALIFIED Dispenser, male (30), required for N.H.I. chiefly; accurate, neat, quick; outdoors; permanent. Apply by letter, with snap, and fullest particulars of experience, references, height, salary, etc., to 145/13, Office of this Paper.

SHEFFIELD.—Assistant, unqualified, about 23 years of age, for Light Retail, Dispensing and Photographic business. Please state age, experience, and salary required. 142/37, Office of this Paper.

SHEFFIELD.—Gentlemanly Assistant, unqualified, about 24 years of age, who has had good experience in Light Retail, Dispensing (N.H.I.), and photo business. Full particulars, age, experience, salary required, etc., to 146/10, Office of this Paper.

SOUTHSEA.—Wanted at once, smart Assistant. When applying, give age, experience, salary, etc., and also photo if handy. Arnold & Sons, 2 King's Road, Southsea.

SURREY.—A really smart, qualified Manager (married) required, age 30-35, for a good-class Light Family Retail and Dispensing business (no house) in a town a few miles from Croydon. Give full particulars, sending photograph and stating age, salary required, previous experience, and when at liberty. 142/312, Office of this Paper.

WEST LANCASHIRE.—Qualified Manager required, age 30-35, for Cash Retail, Family and N.H.I. Dispensing business in large town; previous experience of this type essential. State age, salary required, and when at liberty. 142/314, Office of this Paper.

YORKSHIRE, WEST RIDING.—Qualified Manager required for Light Retail and Dispensing business, with house attached; good agreement on takings given. Apply, stating age, salary required, and when at liberty, 142/313, Office of this Paper.

CAPABLE, qualified Manager required for busy business in market town of Kent; applicants must have a thorough knowledge of the Agricultural side of the business and be smart business men. State age, salary required, previous experience, and when at liberty. 142/31, Office of this Paper.

YOUNG qualified Chemist required to assist in management of branch business. Apply, stating references, experience, salary required, T. Harvey, 68 Station Road, Devonport.

ASSISTANT; unqualified; lady or gentleman; age about 23 years; accurate Dispenser and good Window-dresser essential. All particulars in first letter. Applications unanswered in 7 days respectfully declined. F. Ellison, Chemist, Bishopton Lane, Stockton-on-Tees.

ASSISTANT, male, qualified preferred, for high-class Dispensing business; no N.H.I. Dunsford, Chemist, Torquay.

ASSISTANT; unqualified; 25-35; must be capable Dispenser and quick Counterman; good prospects for right man; interview essential. "P. B. P.," 10 Powis Street, Woolwich, S.E.18.

ASSISTANT; male; good experience in high-class Dispensing business essential; outdoors; personal application preferred. Dyson & Co., 35 Gloucester Road, S.W.

CAPABLE Junior Assistant required for small Family and N.H.I. Dispensing business; must be quick on Counter and willing worker; one not wishing to qualify preferred; vacant February 11th. "Chemist," 9 Thurlestone Road, West Norwood, London, S.E.27.

COMPETENT, unqualified Assistant, capable take charge high-class Drug and Toilet business, with considerable Photographic Department; knowledge Radio sales advantage, but not necessary. Full particulars and photo, 142/35, Office of this Paper.

JUNIOR Assistant, unqualified, male, for a good-class country business; outdoors; no Sunday duty; must be energetic and reliable. Please state experience, salary, etc. Bates & Hunt, Chemists, Wellington, Salop.

JUNIOR, unqualified, for Light Retail and Dispensing. State age, salary required, experience, and send photo (to be returned) and references in first letter. Parkin, Chemist, Stevenage, Herts. (28 miles King's Cross.)

JUNIOR or Improver, immediately, country town, Devon, to assist in Dispensing and at Counter. Apply, stating salary, outdoors, giving reference and particulars of experience, S. J. Buckle, Chemist, Torrington.

JUNIOR Assistant or Improver; vacancy shortly for energetic man used to quick Cash trade, N.H.I. and Photographic goods. Vernon Thompson, Chemist, 159 Stratford Road, Birmingham (and branches).

MANAGER, aged 30-40, required for good-class neighbourhood; knowledge of Photography; good prospects; able to take charge of progressive business. Apply, giving full particulars and salary required, to W. Armstrong, "Deaulieu," Link Lane, Wallington, Surrey.

MESSRS. LATEWARDS, LTD., 389 Ashton New Road, Manchester, wish to state that they received so many replies to their advertisement for a qualified Manager in January 19 issue of our Coloured Supplement that it has been impossible for them to answer each one individually. The position has now been filled.

PART-TIME Assistant wanted for Bayswater; two evenings from 7-10, and every other Sunday; state experience and references; qualification desirable but not essential; knowledge of Dispensing and Salesmanship required. Apply to BM/VCLL, London, W.C.1.

QUALIFIED man wanted at once, or in near future, to supervise branch business in Durham County; age not over 40; salary about £5 to £5 10s. weekly, according to experience. Full particulars, age, photograph, and references to 142/26, Office of this Paper.

QUALIFIED Assistant; lady or gentleman; salary £3 10s.; quick Dispenser, Stock and Counter; permanency. "Chemist," Medical Hall, Kidderminster.

QUALIFIED Manager for small branch shop with summer season trade; man with good references and thoroughly reliable required; thorough knowledge of Photographic goods essential, also good Window-dresser. Apply, Secretary, 86 Victor Street, Grimsby.

QUALIFIED lady Chemist, aged about 25, required; accustomed to high-class business; good Dispensing experience necessary. Please state full particulars in first letter and send copies of testimonials, 145/28, Office of this Paper.

QUALIFIED Manager wanted for mixed business in the Midlands; one with knowledge of garden seeds preferred; lock-up shop; generous profit-sharing terms. State age, salary required, when disengaged, enclose photo, returnable. 145/35, Office of this Paper.

REQUIRED shortly, young qualified Chemist to take charge of reopened neglected branch; Optical qualification preferred. State age, experience, and enclose references, photo if available. All applications answered. Briggs, Chemist, Nelson.

REQUIRED, South Wales, young energetic man qualified to manage shop; able to invest £400; opportunity to learn Optics. Full particulars on application, 144/37, Office of this Paper.

STOCKTAKER (single) required immediately; applicants must have had experience in the taking of Retail Chemists' Stocks. Give particulars of past experience, and state age, salary required, and when at liberty. 142/315, Office of this Paper.

UNQUALIFIED Assistant; must be quick and competent Dispenser, accustomed to good-class Retail and Photographic Counter work. State full particulars first letter, salary (outdoor), when disengaged, and enclose recent photo. Body's Pharmacies, Broadway, Southend-on-Sea.

UNQUALIFIED Assistant for West-End Pharmacy. Apply, by letter, "X. Y. Z.," c/o British Drug Houses, Graham Street, City Road, N.1.

UNQUALIFIED Junior, age 20-22, required at once; good all-round experience essential. Please give full particulars in first letter. Tanners, 75 Silver Street, Edmonton, N.18. Phone: Tottenham 0123.

UNQUALIFIED Assistant (lady or gent.) required at once for a quick cash business; quick and accurate in Dispensing and also help on Counter; must be well recommended. Apply in first instance to 147/4, Office of this Paper.

WANTED, at once, smart lady Assistant (unqualified) for Pharmacy Department; must be competent Window-dresser, accurate Dispenser, and accustomed to quick Counter trade. Apply, stating age, full particulars of experience, salary required, and when at liberty, to General Manager, Hull Co-operative Society, Ltd., Jarratt Street, Hull. Endorse envelope "Chemist."

WANTED, lady Assistant, unqualified, chiefly for Dispensing; must have had good all-round experience, including Counter work; not over 30. Please give full particulars of experience, age, salary required, and when disengaged, D. Edgar Davies, 59 Dudden Hill Lane, Willesden, N.W.10.

WANTED, Branch Manager, with Optical qualification, in S.E. London suburb. State age, references, salary, equipment, and whether married or single. 142/937, Office of this Paper.

YOUNG qualified man required for carrying out relief work during summer season; this is a splendid opportunity for getting experience, with prospects of a good permanency if satisfactory. State age, previous experience, and salary required. 142/316, Office of this Paper.

WHOLESALE.

SCOTLAND.—Representative required for Toilet and Perfumery house; must be travelling with a non-competitive line, and be well acquainted with Wholesale and Retail Buyers; terms, salary and commission. 141/933, Office of this Paper.

ABLE Representatives required; good connection with Chemists, London, Lancashire, Yorkshire, Northumberland and Durham; commission 10%-20% and expenses after trial period. 141/930, Office of this Paper.

BOOTH'S Liquid Court Plaster and Silken, the best; Midlands and South of England still requires active representation; inquiries are invited from Commission Agents with good connections, Wholesale and Retail; these lines are taste fully displayed, are good repeats, and are fully guaranteed. Manufacturers: The Kene Coagulating Cement Co., Carlisle Works, Oldham.

ENERGETIC Representative required by progressive London firm of Manufacturing Chemists, specialising in Packed Medicinal and Toilet Preparations, to call on Retail Chemists in Nottingham, Lincoln, Derby, Cheshire and Shropshire. State full particulars, past experience, references, etc., in first letter. 141/7, Office of this Paper.

ESSENCES.—Assistant wanted in the works of a Lancashire Manufacturer of Flavouring Essences. State experience, salary, etc. Apply 141/927, Office of this Paper.

EXPERIENCED Travellers wanted to sell two well-known Proprietarys to Retail Chemists; only men with established connections in London, provinces, or Scotland need apply. Send particulars of previous experience to 141/928, Office of this Paper.

FIRST-CLASS Representatives wanted at once for all centres to sell, on commission, Proprietary Article shortly to be extensively advertised. P.C.B. 1/21, Office of this Paper.

LONDON Patent Medicine House, old established, require Representative, not over 30, for town; only one understanding Patent Medicines and Sundries considered; well spoken and good appearance essential, and one prepared to work inside if required. State fullest particulars. 141/931, Office of this Paper.

REPRESENTATIVE wanted by old-established firm calling upon high-class Hairdressers, Stores and Chemists, to carry as side line non-competitive, rapid-selling, exclusive Preparation; generous commission terms only. Apply (in confidence), stating territory covered, 142/32, Office of this Paper.

REPRESENTATIVE required for old-established Wholesale Surgical Instrument and Druggists' Sundries House (London), with good connection in provinces, etc. Apply, giving particulars of ground covered, etc. (in confidence), P.C.B. 1/27, Office of this Paper.

REPRESENTATIVES required, with live connection amongst Chemists, Hairdressers and Stores, to sell first-class series of Toilet Preparations, etc.; liberal commission; excellent opportunity for good salesmen. Apply, giving full particulars, to 141/932, Office of this Paper.

REPRESENTATIVES required in every county, with connection amongst Chemists, Hairdressers and Stores, to handle Toilet Preparation which is backed by good advertising; applications should give particulars of experience, ground covered, etc.; nominal salary towards expenses plus commission. Write Box B.191, c/o Aldridge Advertising Service, 34 Paternoster Row, E.C.4.

REPRESENTATIVES required in all territories calling upon Chemists, high-class Hairdressers and Stores, by progressive House manufacturing medium and high-class Toilet Preparations; only real live men with good connections need apply; nominal salary towards expenses, plus commission for short trial period prior to agreement on salary and commission if satisfactory; real opportunity for first-grade men. Write full details of experience, territory, turnover, lines carried (if any), in confidence, 146/36, Office of this Paper.

SPECIALTY Representative required for Bournemouth district; first-class connection with all Chemists; exclusive territory; proprietary article which will be well advertised locally; give two references and full details of selling experience; only a real live wire will be entertained. 141/929, Office of this Paper.

WANTED (London—West-End), a capable man accustomed to Manufacture of all Drug and Toilet Preparations; must be thoroughly experienced and able to take charge when required. Write, stating experience and salary required, to P.C.B. 1/26, Office of this Paper.

(COLONIAL, INDIAN AND FOREIGN.)

MALAYA.—Wanted, fully qualified Dispensing Chemist, capable of managing department; age about 30; unmarried; gentlemanly appearance and address; good Salesman and Dispenser; 4 years' agreement; passages provided; salary £46 monthly, rising to £52; very healthy climate. Apply by letter, with full particulars of previous experience, to P.C.B. 1/8, Office of this Paper.

WEST AFRICA.—An English company have a vacancy on their staff for an Assistant with the qualification of the Pharmaceutical Society; must be unmarried and not over 23 years of age; salary £350 per annum, servant allowance, free quarters; first class passage out and home; 4 months' leave after 18 months, full pay on leave; appointment made by directors in this country; expenses paid for interview when required. Applications, in writing only, giving age, experience, references and photograph, to the Secretary, West African Drug Co., Ltd., 40 Hanover Street, Liverpool.

SITUATIONS WANTED.

RETAIL. [HOME.]

A.A.A.—**PHARMACIST**, young, at present managing for private company, seeks change to position offering scope for initiative; all-round experience, buying, etc.; Lancashire preferred. 141/8, Office of this Paper.

A.A.A.—**QUALIFIED**, 35, married, desires engagement, permanency, London or South Coast, as Manager; 63 years' experience as such; keen, up-to-date expert Window-dresser. Terms, etc., P.C.B. 1/24, Office of this Paper.

A.A.A., M.P.S.; young; alert; disengaged; Locum, part-time or permanency; gentlemanly; persuasive Salesman; excellent experience; recent references; London or provinces. "Chemist," 66 Great Titchfield Street, W.

A—**QUALIFIED**, age 25, Manager of suburban shop, seeks a post in West-End Dispensing business. 142/36, Office of this Paper.

A **CAPABLE**, qualified Branch Manager or Locum, age 36, experienced in good-class Family Retail and N.H.I. businesses, smart Counterman and good Window-dresser, desires post, London or seaside. 145/4, Office of this Paper.

A **QUALIFIED**, Scot, tall, with good all-round experience, at present managing, desires permanency as Manager of Senior; London or Home Counties preferred; free one month's notice. 146/15, Office of this Paper.

A **N** Assistant, 24, tall, high-class experience, Dispensing and Counter, requires post with facilities for some Part I used sole charge. "S," 61 Holland Road, Brixton, S.W.9.

A **S** Manager; qualified; all-round experience; preferably with view to interest in business; any locality; disengaged interview granted. 142/25, Office of this Paper.

A **S** Manager; thorough knowledge all branches; 26 years experience, town and country. "Qualified," Oakwood, Chelmsford Road, S. Woodford, E.18.

A **S** Manager, Senior or General Assistant, Drug Stores or live business; good all-round general experience, multiple shop and fast trade; Prescriber, Counterman, Salesman. "G," 150 Scott-Ellis Gardens, N.W.8.

A **SSISTANT** to Chemist (or Doctor's Dispenser); Hall Dispenser's Certificate; middle-age; active; single; 25 years varied experience (London and country). P.C.B. 1/7, Office of this Paper.

A **SSISTANT**, unqualified, excellent all-round experience, 1 years in present situation, desires berth; London preferred. Rawlins, 272 High Road, Wood Green, N.

A **SSISTANT** (Part I); tall; energetic; smart appearance 4 years' experience; reliable Dispenser, good Case, Counter and Window-dresser, Photography, keen Salesman; excellent references. "Altior," 16 Fulney Road, Sheffield.

ASSISTANT; unqualified; age 21; height 6 ft.; experienced Dispenser, Counterman and Photographic; present employer 4 years; free any time. Wheatcroft, Sylvan Park, Buxton, Derbyshire.

ASSISTANT, unqualified, 28, desires permanency or relief; first-class experience and references; Lancs. or Yorks. preferred. "M. J.," 13 Hangingroyd Lane, Hebden Bridge, Yorks.

ASSISTANT; qualified; young; energetic; high-class experience; excellent references; persevering; good Salesman; willing, obliging, and adaptable; liberty now. Watson, 15 Granville Road, Harrogate.

ASSISTANT, F.S.M.C., 28, 7 years' experience, referred Pharmacy, requires situation, London. "E. B.," 43 Watling Avenue, Edgware, Middlesex.

ASSISTANT, 25, with Continental experience, seeks situation in West-End of London during summer, winter on Riviera. Georges, 2 Marlboro' Court, Regent Street, W.1. Ger. 6589.

ASSISTANT; unqualified; experienced; N.H.I.; Counter, Windows, or manage Drug Stores; London only. Write "Lonicerd," 144/35, Office of this Paper.

ASSISTANT, young lady; unqualified; capable; 9 years' good all-round experience; West of England preferred. 145/24, Office of this Paper.

ASSISTANT 25, unqualified, requires good London position; 8 years' high-class experience, Dispensing, Counter, Photography, Window-dressing; interview. 145/25, Office of this Paper.

BEST-CLASS Assistant where qualification not essential; can manage; Prescriber, Surgical, Dispensing and all usual side lines; strong business-building personality; disengaged; moderate salary for permanency; article; accomplished literateur, advertising, draughtsman. "Therapeutics," 21 Albion Place, Maidstone.

BRANCH Manager; qualified; 17 years' unbroken record; references unquestionable; satisfaction assured—as now; disengaged suited; locality optional. Littler, Hemel Hempstead, Herts.

CHEMIST, middle-aged, requires Superintendency, all-round experience. "Chemist," 53 Louis Street, Leeds.

COMPETENT, qualified Branch Manager, 25, desires situation; excellent Salesman, accurate Dispenser; good references; available immediately. "Chemist," 26 Camp Road, Leeds.

COMPETENT, reliable, steady man desires permanent or temporary work; thoroughly experienced; unqualified; smart; active; now disengaged; high references. "Mr. F.," 286 Kingsland Road, E.8.

COMPETENT Junior Assistant desires situation; 3½ years' excellent experience in high-class Pharmacy; Part I. Ashworth, 30 Ingle Grove, Morley, Leeds.

DISENGAGED—Locum or permanency; young; qualified; all-round experience; good-class country or suburban business preferred; references O.K.; smart appearance; good Salesman. 143/2, Office of this Paper.

DISENGAGED February 4; qualified, experienced Pharmacist; Locum (or permanency London); middle-aged. "M.P.S.," 156 Lower Road, Clapton, E.5.

GENTLEMAN, qualified, 32, exceptional modern business experience, desires progressive position as Manager (living accommodation); Southern Counties. 144/23, Office of this Paper.

JUNIOR (male), age 20, 5 ft. 8 in. in height, seeks engagement in good Dispensing business; over 3½ years' experience; passed Preliminary; free immediately. J. E. Davies, c/o Mr. Llewelyn, M.P.S., Pharmaceutical Chemist, Cardigan.

JUNIOR, age 21, all-round experience, energetic and obliging, good references, studying Part II, requires situation; Newcastle or district; highly recommended. Darney, Chemist, Jesmond, Newcastle-on-Tyne.

JUNIOR; 21; first-class Dispensing experience; disengaged. Apply C. Hunter, "Greenwood," Cuckfield, Haywards Heath, Sussex.

JUNIOR Assistant, excellent Dispensing and Counter experience, desires post in high-class business; Bristol or Bath district. 145/12, Office of this Paper.

LADY Dispenser-Book-keeper (Hall) requires post with Doctor or Institute; able to drive car. Apply E. Rodger, 57 Stanhope Road, Darlington.

LADY Dispenser (Hall qualification) requires post in London, W. or N.W.; 14 years' experience; 5½ years in present situation. Apply "L. S.," 156 Elgin Avenue, W.

LADY Improver; 20; just completed 3 years' indenture; good Dispenser, smart on Counter; all-round experience. Davies, c/o Roper, Chemist, Kington, Herefordshire.

LADY Dispenser, aged 26, Hall certificate, experienced in Hospital and private Dispensing, requires temporary or permanent post. Apply 144/30, Office of this Paper.

LADY Dispenser; Hall; experienced; Chemist or Doctor; Book-keeping; temporary or permanent; Worcester, Bristol, Bath district; disengaged; good references. 145/15, Office of this Paper.

LADY Dispenser (Hall) requires part-time post in or near London. 146/38, Office of this Paper.

LADY Dispenser (Hall), experienced, requires post with Doctor or Chemist; temporary or permanent; also Book-keeping-Typewriting. 145/39, Office of this Paper.

LADY, qualified, requires post, preferably with management; fully experienced in all branches of Retail. 146/30, Office of this Paper.

LANCASHIRE OR MIDLANDS—Qualified man, 35, married, competent and reliable, as Assistant or charge of branch. 146/7, Office of this Paper.

LIVERPOOL OR MANCHESTER—Qualified, male, 35, disengaged, wants Locum, permanent, or part-time position; smart Salesman and Window-dresser; good buyer; London and provincial experience; thorough knowledge of mail order and advertising in all its branches. "Pharmacist," "Hillside," Mill Bank, West Derby, Liverpool.

LOCUM—Experienced Chemist, shortly opening own business, available February. "W. J. C.," 39 Elm Road, North Prenton, Birkenhead.

LOCUM; experienced in all branches; qualified; active; excellent references; terms moderate; disengaged now. "S. C. I.," 54 Priory Road, West Hampstead, N.W.6. Phone Hampstead 7151.

LOCUM; qualified; reliable; experienced; registered R.P.U.; any period; disengaged. "L.," 119 Fairlands Avenue, Thornton Heath, Surrey.

MANAGER or Senior position desired; qualified; 26; excellent experience. "F. W. B.," 33 St. James' Road, Wandsworth Common, S.W.17.

MANAGER, M.P.S., resires position as such; good home and foreign experience, also Hospital; some knowledge of Optics and Bacteriology; free end of February; highest references. Apply 143/4, Office of this Paper.

MANAGER or qualified Assistant; 31; tall; at liberty; good references. F. R. Smith, 10 Gray Road, Colchester.

MANAGER; qualified; 36; married; reliable and trustworthy; permanency; London only. "M.," 21 Whittingstall Road, Fulham, S.W.6.

MANAGER or Assistant; 9 years' experience, private and company shops, Counter, Dispensing, Photographic, Window-dressing, and Buying; excellent references; disengaged; interview. "Square," 72 Jeffreys Road, Clapham, S.W.4.

MANAGER, qualified, active and experienced, at liberty, desires position. Briggs, 8 Brooke Street, Dudley.

MANAGER or Senior; qualified; young; tall; smart; knowledge of French, German, and Photography; good experience; now disengaged. Apply 145/3, Office of this Paper.

MANAGER, qualified, experienced, desires position where there is an opportunity for investment in business or succession; Midlands preferred; disengaged. 145/8, Office of this Paper.

M.P.S., 30, as Manager or Senior; thoroughly experienced in all branches; permanency required; steady, reliable worker; personality; London only; City, West-End or Middlesex district preferred. 143/5, Office of this Paper.

MIDDLE-AGED, unqualified Assistant desires a permanent situation; thoroughly conversant with all departments of the business; can be well recommended by good firms. "Pushful," 133/4, Office of this Paper.

NURSE-DISPENSER (Hall) desires post; free now; 3 years in last post. "M. G.," c/o W. H. Smith & Son, Sutton, Surrey.

PART-TIME—Gentleman, referred Pharmacy, requires part-time work, London; excellent West-End experience; clever Salesman, accurate Dispenser; age 24; tall; smart appearance. P.C.B. 1/22, Office of this Paper.

PART-TIME, Locum or permanency, Superintendent, any capacity; disengaged; experienced pharmacist. 146/34, Office of this Paper.

PERMANENCY—Assistant; excellent Counterman, highly efficient Dispenser; thoroughly competent all branches; no optics; disengaged; salary £3 ss. weekly. 147/2, Office of this Paper.

PHARMACEUTICAL Chemist, mature age, ripe experience, accustomed control, desires appointment in progressive business where organising ability, initiative, tact, business knowledge appreciated and suitably rewarded. Please state broad outlines of business and terms in first letter, 145/38, Office of this Paper.

PHARMACIST, 38, seeks responsible position; many years West-End manager; long experience in organising and managing; unblemished record. Apply 140/39, Office of this Paper.

PHARMACIST, 35, married, experienced Hospital, Dispensary and Wholesale, desires responsible post; well educated; free early March; in or near London preferred, not essential. Apply 142/340, Office of this Paper.

PHARMACIST, 35, tall, married, requires post, Branch Manager; 18 years' all-round experience; N.H.I., etc.; disengaged early March; seaside preferred. Apply 142/34, Office of this Paper.

PHARMACIST, F.S.M.C.; 8 years' West-End experience; Manager or Assistant; West or S.W. district preferred; disengaged February 11. Panchen, 2 Peterborough Road, Harrow.

QUALIFIED lady, 25, good experience and references, requires post; London or Bristol districts preferred. 143/7, Office of this Paper.

QUALIFIED; 24; disengaged; good Counterman and Photographic knowledge; London experience; Bournemouth district preferred. Tugwell, Church Street, Tetbury, Glos.

QUALIFIED; 24; disengaged; first-class experience, Dispensing, Toilet, Photographic; good recommendations. Edward Scott, 5 Garden Terrace, Keswick, Cumberland.

QUALIFIED; 26; educated; West-End and provincial experience; Locum or permanency. H. Smith, 24 Tavistock Square, W.C.1.

QUALIFIED Branch Manager, Senior; experienced; busy centre with N.H.I.; Wolverhampton or Birmingham area. Blakemore, Gornal Wood, Dudley.

QUALIFIED, 25, high-class London and Provincial experience, Counter, Dispensing, Photography, requires post in London or South. 145/2, Office of this Paper.

QUALIFIED (1906); high-class experience; West-End Dispensing; excellent references; competent and reliable; now disengaged. 144/32, Office of this Paper.

QUALIFIED; Manager 30 years; excellent references; married; London or Coast; Locum or permanent. 146/33, Office of this Paper.

QUALIFIED; 23; married; excellent references; good all-round experience; Midlands or South preferred. 147/1, Office of this Paper.

SWISS, qualified Druggist, speaking English, French, German, good Window-dresser, experienced in Photography and Perfumery, wants to learn the English Chemist's line; salary of subordinate matter. P.C.B. 89/21, Office of this Paper.

UNQUALIFIED, 36, single, seeks change; experienced; quick Dispensing, Counter, Photographics; West of England preferred. 143/3, Office of this Paper.

UNQUALIFIED; 20 years' sound experience in all branches of the Retail; 9 years present berth. Cook, 21 Cartergate, Newark.

UNQUALIFIED wishes post in Retail or Wholesale, any department; cash security given for permanency; over 20 years' experience in own business; capable of under management; reasonable wage; age 45. 146/29, Office of this Paper.

WHOLESALE.

MEDICAL, DENTAL or PHARMACEUTICAL PROPRIETARIES.

ADVERTISER, late Manager of Sales and Professional Departments of well-known Pharmaceutical Proprietary, now disengaged, seeks similar executive appointment.

Many years' experience of sales and professional propaganda and general executive work.
Extensive knowledge of the chemists' market and the professions.

Exceptional qualifications.

Write 145/30, Office of this Paper.

A QUALIFIED lady desires post in Wholesale or with Doctor in London; good references. 145/1, Office of this Paper.

A THOROUGHLY competent Representative, with own car and strong connection; whole of London Chemists and Hairdressers; would consider good proprietary house. 141/508, Office of this Paper.

A YOUNG Pharmacist, at present managing Retail Pharmacy, is keen to become Representative of a Drug firm; tall, with Hospital and varied Retail experience; can await suitable opening. 142/29, Office of this Paper.

A S Traveller; disengaged; only first-class firms; qualified Chemist; formerly over Welsh and West of England; terms, salary, expenses, and commission. Slinn, 51 Butterson Road, Rhyl.

ENERGETIC Salesman, 27, worked Northern Counties 7 years by car, desires first-class side line; advertised Proprietary preferred. "Cringewood," Elms Drive, Bare, Morecambe.

ON the advice and persuasion of several Travellers of repute (including one sales manager) I am offering my services to any good Wholesale or Manufacturing firm as a Representative. I am qualified (aged 25), with nine years' extensive retail experience both London and Provinces. Full particulars, write 145/31, Office of this Paper.

PHARMACY Assistant, experienced in Window display, desires change to progressive firm. Reply 146/17, Office of this Paper.

REPRESENTATIVE, capable, energetic, keen salesman, 20 years' excellent connection, South and West of England, desires position with good house; Drugs, Sundries or Proprietary. F. H. Pike, "Woodside," Elstead, Godalming.

REPRESENTATIVE (M.P.S.) desires engagement with firm of repute; Midlands preferred; big connection amongst Chemists, Midlands and West of England; or would consider a few first-class side lines. P.C.B. 1/25, Office of this Paper.

TOILET Representative, calling London Stores, Chemists, Ladies' Hairdressers since 1920; disengaged; commission only; Houses please save postage. 145/37, Office of this Paper.

TRAVELLER, established connection, open to represent a good house, either on salary or commission; own car. Reply 146/40, Office of this Paper.

Printed for the Proprietors by THE AVENUE PRESS (L. UPCOTT by the Proprietors, Morgau Brothers (Publishers), Ltd., at 42

CLEAR OUT—your Old or Damaged Stock of Photo Goods.

Why keep them any longer? Turn them into CASH.

I GIVE BEST PRICES for Old Films (damaged, fogged or expired dates); Packet Papers. Cards (any sizes). Old Photo Goods or Cameras. Bromide Papers. Plates (all sizes, all makes). Send any goods in the photo line. I buy all, good or bad. Cash per return. A good price for all Cameras. Send them along.

S. E. HACKETT, 23 July Road, Liverpool

(COLONIAL, INDIAN AND FOREIGN.)

EXPERIENCED London Pharmacist, age 28, single, desires progressive position in French pharmacy; preferably Riviera. 144/34, Office of this Paper.

FOR SALE.

CHEMIST'S Shop closing down, Stock and Fixtures for Sale. Apply 71 Church Street, Shoreditch, or 'phone Bishopsgate 5214.

MISCELLANEOUS.

CHEMIST FITTINGS.—Complete Fittings in stock. Ranges of Drug Drawers with glass labels, shelving and lockers, glass-fronted Counters, Dispensing Screens, Wall Cases, etc.; all made in sections which any local man can fix. Also Second-hand Fittings, Shop Rounds (ribbon and recess labels); Cash Tills from 15s. 6d. Kwik-Sale Case, special Chemist design. D. MATHEWS & SON, Chemist Fitters, 14 and 16 Manchester Street, Liverpool.

CHEMISTS' FITTINGS.—Showcases, Wallcases, Drugfittings. Counters, Drawers at low prices. Before you decide send to **GEORGE COOK**, the well-known Chemists' Fitter, 27 Macclesfield Street, City Road, E.C.1.

FOR Sale, one Brown's gas-heated Still, complete with stand and burner and 30-gallon copper storage tank, coated internally with pure tin, cost £21, in good working condition, £8, carriage paid. Offer wanted for about 6 gross 1-lb., 3 gross 2-lb., 5 dozen 4-lb., 1 dozen 7-lb. Amber Malt and Oil Jars, complete with wads and screw caps. **LANDS, LTD.**, Hermitage Road, Coalville, near Leicester.

FOR Sale, five Tablet-making Machines, hand manipulated and simple to work. These, with excellent Formula for making Skin Balm, for Sale at half cost, viz., £80, or offer. Replies "EASIT," 11 Springa Street, Marsh, Huddersfield.

SECOND-HAND CHEMISTS' FITTINGS.—We have an exceptionally fine selection of these in all sizes; prices are right, and goods are in first-class condition; we shall be pleased to supply particulars and prices. Call or write, **RUDDUCK & CO.**, 219 Old Street, London, E.C.1.

VERY valuable Proprietary for Sale, namely, Machon's Comfortine; has been established for over 50 years, and when advertised has a large sale. For price and particulars apply to **J. H. LAND**, "Highbry," Stonegate Road, Leicester.

£90.—10 ft. Drug Fitting, comprising cupboards, drawers, lockers, cornice and shelving; 8 ft. Serving Counter with glass cases in front; 6 ft. Dispensing Screen and Counter; 6 ft. Wall Case, Perfume Case and Desk; Counter Drawers; mahogany; packed and free on rail London. **PHILIP JOSEPHS & SONS, LTD.**, 90 and 92 St. John Street, Clerkenwell, London, E.C.1. "Pharmacy Fitters for Over a Century."

£95 **FOR A COMPLETE SET** of Pharmacy Fittings, ready for immediate use, 10 ft. mahogany Drug Fitting with showcase, drawers, cupboards, shelving, etc.; 6 ft. Wall Case in two heights; 6 ft. Dispensing Screen with showcase and bevelled mirror in centre; 10 ft. mahogany Serving Counter with cases in front; two nests of Counter Drawers; plate-glass Counter Case, Perfume Showcase and Desk, Check Till. **PERCY R. E. JOSEPHS**, 68 Old Street, 1/5 Tilney Court, London, E.C.1. 'Phone: Clerkenwell 0929.

£87 15s.—**SET OF MAHOGANY FITTINGS**.—10 ft. Drug Run, 30 drawers (glass knobs and labels), shelves, cupboards and lockers; 10 ft. glass-fronted Counter, nest of 11 drawers at back; 6 ft. Wallcase, 6 ft. Dispensing Screen, Perfum Case and Desk. Illustrations on request. **E. BERG, LTD.**, 336 Old Street, London, E.C.1.

EXCHANGE COLUMN.

WANTED.

SHOP ROUNDS AND **JARS**; good condition only. 142/938 Office of this Paper.

GLASS TALLBOY, height 5½ ft. Particulars and lowest price "Chemist," 372 Harrow Road, London.

CHEMIST'S SHOP FITTINGS wanted immediately; spot cash. Full particulars to 168 Canongate, Edinburgh.

GOWER, Chemists' Bookseller, 41 Voltaire Road, Clapham wants Pharmaceutical Books, including Pharmaceutical Formulas, B.P.C., P.J.F., Optical Books.

GILL & SON, LTD., 55 to 57, Drury Lane, W.C.2, and Published Cannon Street, in the City of London.—Feb. 2, 1929. [92/36]

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URIC ACID ELIMINANT possesses valuable antiarthritic, diuretic and laxative properties.

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INDICATED IN GOUT, RHEUMATISM, SCIATICA,
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GRAVEL and all diseases associated with the Uric Acid diathesis.

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